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OPERATIVE TREATMENT OF BILATERAL CICATRICIAL ANKYLOSIS OF THE JAWS.

A CONTRIBUTION BASED ON A REPORT OF A CASE OF TWENTY YEARS' DURATION, RELIEVED BY A SERIES OF PLASTIC AND OSTEOPLASTIC OPERATIONS.*

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NEW ORLEANS.

The occurrence of permanent trismus or "locked jaws" ("ankylosis," "occlusion," "constriction" of the jaws) may result from a variety of well-known causes which, according to the permanent or temporary nature of the cause, or the parts involved in the pathologic process, vary in their prognosis and in their amenability to treatment. It is not my purpose to discuss this subject systematically, but to limit my remarks to the consideration of that most frequent, distressing and intractable variety of trismus in which the jaws are permanently locked and immobilized by the formation of rigid cicatricial bands and masses which hold the maxillæ in an unyielding clasp, reduce the capacity of the buccal space and thus more or less completely interfere with the movements of mastication. (Ankylosis spuria mandibulæ of the older writers.)

While the movements of the lower jaw may be restricted by the formation of cicatrices in the soft parts outside of the mouth in consequence of destructive lesions, accidental injuries, pathologic processes and surgical operations which cause great destruction and scarring about the face, the peribuccal and perimaxillary tissues, as is often seen as a sequel of burns, gunshot wounds, carbuncles and malignant ulcerations, etc., these are not, as a rule, so serious from the functional or surgical point of view as the class of cases in which the immobility of the jaws is caused by a destruction of the lining mucosa of the mouth. In these cases the mucous membrane is usually destroyed by progressive ulceration or gangrenous inflammations which, spreading on the inner surface of the cheek, give rise to either unilateral or bilateral ulcerations, which in healing leave large areas of dense, retractile, cicatricial tissue. Many of the most destructive, gangrenous and ulcerative infections of the mouth which are responsible for the loss of the oral mucosa occur in early life (noma, cancrum oris, scarlatina, diphtheria, mercurial stomatitis, syphilis, tuberculosis), and, as a result of the tender age of the patients, lead, when neglected, to a series of secondary changes, which influence most injuriously the entire development of the face, thus adding great disfigurement to a distressing interference with a most important function.

When cicatricial trismus occurs in early childhood the development of the lower jaw is greatly interfered with, and it remains rudimentary and infantile in size and shape. The chin is dwarfed, small and retracted, giving to the face an asymmetrical and ungraceful appearance (micrognathism), which is most striking when viewed in profile (the so-called "bird face"). The eruption of the permanent teeth is likewise interfered with; the molars make their appearance in vicious attitudes; more often they are deviated from a vertical to an oblique or horizontal axis and the grinding surfaces face the tongue instead of the teeth of the upper jaw. The front teeth of the upper jaw project beyond the lower set; the lower teeth are imperfectly developed, unhealthy and covered with thick, offensive salivary incrustations and food accumulations. The secretions of the mouth are usually malodorous from stagnation, and there is a perceptible dribbling of saliva when the angles of the mouth are involved in the contraction. In spite of the rigidity of the jaws, the reduced buccal space, and the inability to separate the teeth, and of their extremely defective mode of feeding, it is remarkable how well these patients adapt themselves to these conditions and succeed in keeping up a fair state of general nutrition. More often, however, these persons succeed in nourishing themselves because of the absence of teeth or irregularities in their development, which allow the food to be forced between the missing teeth or interdental spaces. The entire muscular apparatus of mastication undergoes atrophic changes from arrested development and disuse; in fact, the entire innervation and vascular supply of the inframaxillary portion of the face suffers from the same cause and retains an infantile form, markedly contrasting with the upper jaw and face, which continue to develop and grow in normal proportion until adult life.

To add to the complexity of these cases, we find that the cicatricial masses in the rear mouth undergo, in some instances, a process of osseous infiltration, which transforms the scar tissue into a solid piece of bone, of the consistence of old callus, which permanently unites the upper and lower maxillæ into a single immovable bone.[1] This is particularly true of those fortunately rare cases in which the original causal infection has spread from the mucosa to the periosteum, exciting this to the formation of hyperostoses by the proliferation of osteoblasts in the budding granulation tissue.

When these ossified bands exist, they are usually found in the posterior part of the mouth, in the vestibular

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1. Numerous cases of ossification of intrabuccal bands will be found reported in the literature; the cases reported by C. Esterle, B. Holt, Marchiafava, Sebastian, Walter, Sarrazin, Heath and others, are fully referred to in the index catalogue of the Surgeon-General's library, vol. vii.

space, extending from the upper gingival border to the inner surface of the body of the lower jaw, as far forward as the bicuspids or even the commissure of the mouth. In dealing with cicatricial occlusion within the mouth, the resistance, thickness and density of the scar bands must be considered. Not only is the cartilaginous and osseous transformation of these bands a matter of importance, but their situation and limitations are of still greater importance in determining the prognosis and the mode of procedure.

As shown by Verneuil, who so ably studied this form of maxillary ankylosis 40 years ago, we should try to distinguish, for practical purposes, the cases in which the cicatrices occupy the anterior from those which contract the posterior regions of the oral cavity. When the scar bands are limited to the anterior (facial) part of the vestibule and lips, the prospect of operative relief is excellent and the prognosis very favorable; but when the scar masses are formed on a level with the last molar or in the pterygoid region along the angle, body, and ramus, the possibility of restoring the mobility of the lower jaw without resorting to some form of intrabuccal plasty, combined with osteotomy and pseudarthrosis, is reduced to a minimum. Even a comparatively superficial destruction of the mucous membrane in the retrovestibular space and along the inner surface of the ramus is sufficient to cause permanent contraction and immobility of the jaw, because in the normal state the mucous membrane is tightly stretched over and adherent to the periosteum and peribuccal tissues. Inflammatory and ulcerative processes starting in the mucous membrane at this level, therefore, are easily propagated to the periosteum and bone, forming dense, fused, unyielding masses, which do not permit of anatomic differentiation into their component elements.

It is evident from what has been stated that the problem which confronts the surgeon who would attempt to give relief in such cases by mobilizing and liberating the lower jaw is far more complex than a superficial glance at the subject would imply. In fact, the division or excision of the constricting cicatricial bands is only one of its phases, and other factors in the problem must be considered before anything like a functional restitution of the lower jaw can be obtained. In view of the arrested development of the jaw, of the atrophied and shortened muscles and ligaments which are concerned in the control of the inferior maxilla, and the vicious attitude of the teeth, it is evident that neither a functional, cosmetic or anatomic restitution, in a complete sense, can be expected by any mode of treatment. Nevertheless, even in such extreme cases, fortunately very rare at the present time (when the opportunities for surgical relief are given to all in almost every community), the surgeon may still hope to restore the mobility of the lower jaw sufficiently to permit of easy feeding and mastication, and thus greatly relieve the condition of these unfortunate sufferers.

In the treatment of the rare and grave type of cases which we have in view, no single method of treatment will suffice, and it is only by judiciously combining a variety of procedures that we may hope to release the jaw and obtain a certain degree of mobility which will permit the patient to open his mouth and to masticate solid food.

In unilateral cases, and especially where the scar tissue only involves the angle of the mouth and lateral aspect of the cheek, the problem is solved with comparative ease, and a simple plastic operation will generally suffice. In the symmetrical or bilateral cases involving the deeper recesses of the oral cavity, osseous sections must be added to dermal transplantations to obtain the desired result. None of the ordinary methods by which the jaw can be forcibly separated by mechanical dilators, wedges, conical screws or mouth gags, can be expected to give even temporary relief; to have attempted any procedure of this sort on the patient whose history has furnished the text for this paper, would have resulted simply in breaking the teeth or fracturing the jaws. The simple division of the ossified cicatricial masses with knife and chisel would have been dangerous on account of the great depth of the scars, and could not be considered.

Mears' method of dividing the scar tissue after creating a mucous lined tunnel under it with a seton-like ligature, valuable as it is and worthy of trial in simpler cases, was evidently impossible here.[2]

The various procedures which have been recommended for the permanent relief of cicatricial occlusion of the jaws, exclusive of the simple palliative and mechanical methods previously referred to, may be grouped under the following heads:

1. Division and excision of the scar tissue with substitution of transplanted skin or of mucous flaps, for the lost mucosa.

2. Division and detachment of tendinous insertions and aponeurotic expansions of the muscles of mastication at their surface of attachment to the lower jaw (masseter, pterygoid, etc.), after division of the cicatricial bands in the mouth.

3. Creation of a new point or center of motion in the body of the jaw (pseudarthrosis) by osteotomy in front of the resisting and unyielding scar masses when these exist in the postbuccal space.

4. Excision of the temporomaxillary joint, condyle or part of the lower jaw, with or without associate myoplasty.

EXCISION OF SCAR AND SUBSTITUTION OF HEALTHY SKIN.

The first group embraces the greatest number of suggestions, some of these very ingenious. We should note that in recent years and since the advent of a more aggressive and radical technic for the cure of malignant diseases, the indications for the extirpation of the mucous membrane of the mouth in dealing with growths of the face, and especially of the cheeks and lips, have increased. Surgeons have been compelled to tax their ingenuity considerably in the effort to prevent the con-

2. Dr. Mears' method is thus described by the author ("The Operative Treatment of Occlusion of the Jaws," by J. Ewing Mears, THE JOURNAL A. M. A., Sept. 18, 1897): "In performing this operation a long-handled, slightly curved needle threaded with a strong aseptic twisted-silk ligature of sufficient length, is introduced at the angle of the mouth on the inner surface and carried carefully into the space between the cicatricial mass and the buccinator muscle and the point made to emerge at the posterior border of the last molar tooth of the lower jaw—at which point the posterior border of the cicatricial tissue can usually be felt. The ligature is now seized with the toothed forceps, the needle withdrawn, the ends tied and the ligature left loosely in the channel thus formed. As the intention is not to divide the mass by the ligature, this is permitted to remain without traction, the formation of the canal lined by normal mucous membrane being facilitated by drawing the ligature backward and forward, and thus destroying any adhesions which may form. When a probe passes readily and smoothly and without provoking bleeding, it may be assumed that the canal is lined by normal mucous membrane. This is usually accomplished in three weeks, when the scar tissue is divided with a blunt-pointed bistoury introduced into the canal." A mouth gag is then introduced between the teeth, and the mouth forced open to the widest extent. This is repeated at intervals until the mouth is healed, etc. Dr. Mears' experience with this method appears to have demonstrated its permanent value.

tractions that necessarily follow an extensive extirpation of the mucosa.

In the endeavor to find a suitable material, free from the retractile tendency of scar tissue, a number of plastic operations have been devised (cheiloplasty and meloplasty), in which the transplantation of pediculated skin flaps have figured largely. Autoplastic skin flaps obtained from all parts of the face, neck and cheek and upper extremities have been utilized; mucous flaps from the mouth (palate and lips) have been tried less often; Thiersch grafts have been utilized freely as secondary aids to epidermization of raw surfaces; even heteroplastic flaps taken from the mucous lining of the dog's mouth have been transplanted from the living animal, but with very doubtful results.[3]

Among the more practicable and useful of the numerous plastic operations that have been suggested is the meloplasty of Jäsche.[4] This operator, after splitting the cheek from the angle of the mouth to the masseter, including the cicatrized mucosa, sutured the skin of the cheek, on each side of the fissure, to the gums and mucosa of the vestibule inside of the mouth. After adhesion of the skin has taken place, two semilunar skin flaps of sufficient length are dissected out of the skin of the cheek and attached to the upper and lower lining of the artificial oral cleft, leaving the flaps attached to the gums, thus inverting the free skin edges into the mouth. After this the flaps are sutured in the mouth by their edges and the cheek is closed over the defect, restoring the mouth to its normal dimensions. Gussenbauer's[5] method is in some cases still more serviceable. This author, after splitting the cheek through and through, from mouth to masseter, and thus dividing all resisting scar tissue freely, cuts a trapezoidal flap out of the lateral aspect of the neck and folds it over the denuded masseter into the mouth where it is sutured to the mucosa. After adhesions have been contracted, the pedicle is cut off and the graft is turned into the mouth throughout its free extent, with its dermal surface facing the teeth. After suturing it in place to the edges of the cleft and angle of the mouth on the inner side, the cheek is closed. Jäsche's and Gussenbauer's operations are typical of the modern methods of autoplasty and differ from the earlier operations,[6] in which attempts at plastic repair were made by sliding flaps in which the dermal surface remained external and no allowance was made for secondary recontraction of the flap surface on the inner or mucous side of the mouth.

Gersuny opens the mouth through an external incision made along the lower border of the jaw from the chin to the angle. A skin flap large enough to cover the defective area in the mouth is dissected from the submaxillary region and is completely mobilized, with the exception of a pedicle made of periosteum, cervical aponeurosis and other subcutaneous tissues. With this pedicle as a base of vascular supply, the flap is turned into the mouth with the skin surface facing the teeth and is attached to the free margins of the defect. The external incision is then closed. This method has been variously modified by v. Hacker, Eiselsberg, and Kraske. Its chief merit is that it diminishes the scarring in the face. On the other hand, Bardenheuer utilizes a pediculated flap borrowed from the hairless parts of the forehead with its pedicle attached to the lateral surface of the nose. This flap is turned into the mouth, where the skin is substituted for the defective mucosa. When the skin of the cheek has been destroyed with the mucous membrane, an additional pediculated flap is borrowed from the neck and made to cover the cheek in such a manner that the raw surfaces of both flaps are brought together; thus the forehead flap is made to serve as mucosa and the neck flap covers the defect in the cheek. This method has been adopted, with modifications, by Oberst, Rötter and others. In other cases, Bardenheuer filled the defects in the cheek with pediculated flaps borrowed from the arm.

Partsch of Breslau prepares his flap for transplantation before attempting to use it in the mouth by first dissecting and mobilizing it in the neck, after which its raw surface is covered with Thiersch grafts. In this manner the flap is covered with epidermis on both surfaces. When epidermization has been accomplished, the diseased area in the cheek is removed and the graft thus prepared is attached permanently *in situ*. In cases in which the gap to be covered in the mouth is very great, Hahn and Israel cut a very long pediculated flap from the neck and attach it to the mouth with the skin surface looking inward; after this has become adherent, the long pedicle is detached at its root and what remains of the flap is folded on itself so that the raw surfaces come together, leaving a thick double layer of skin at the seat of the defect. Hahn's flaps begin at the clavicle and end at the mamma. The flap is dissected upward toward its clavicular attachment and the mammary end is attached to the mouth; subsequently, when this has adhered, the clavicular pedicle is divided and the flap is folded on itself like a booklet, forming a double layer, as in the previous case. Following the same plan, Israel makes his flap extend from the angle of the jaw to the clavicle and utilizes them in the same way.

Czerny has applied similar methods by cutting out a long flap with its pedicle at the zygoma and its free extremity as low down as the middle of the sterno-mastoid; this flap is folded on itself and made to cover the defect in the cheek at the same sitting. In connection with these plastic transplantations of the skin into the mouth (meloplasty), it is well to remember with Lexar,[7] to whom I am indebted for a large number of the preceding references, that the hope once entertained that the skin when transplanted into the mouth would lose its cutaneous peculiarities and finally cease to grow hair, has never been realized, though it has been shown by Ritschl that the skin does undergo atrophic changes in the course of time. Tufts of hair will grow in the mouth years after the transplantation of the skin. Thiersch mentions a case in which hair formed in this way 21 years after the operation. Hence the importance of selecting skin from normally hairless surfaces whenever possible. In operations on the cheek, the preservation of Stenson's duct and its replantation into the mouth is very important to prevent "weeping" scars.

3. See Halsted's case of cicatricial contraction of the jaws (unilateral), treated by transplantation of a mucous graft taken directly from a dog's mouth. Johns Hopkins Hospital Bulletin, December, 1890.

4. Jäsche, G.: Ueber die operation der Mundklemme. Med. Zeitung. Russland. St. Petersburg. 1868. xv. 209. The same: Zur operation Behandlung der narbigen Kieferklemme. Arch. f. Klin. Chirurg., Berlin, 1868, ix, 226 229.

5. Gussenbauer, C.: Ueber ein neues Verfahren der Stomatoplastik zur Heilung der narbigen Kieferklemme. Arch. f. Klin. Chir., Berlin, 1877, xx. 526-536. 1 pl.

6. See a noted case reported by Valentine Mott, "A Case of Rigidity of the Lower Jaw and Tallacotian Operation," Amer. Jour. Med. Sci., 1831-2, ix, 47-50, 1 pl.

7. Handbuch der Praktischen Chirurg., Bergmann-Bruns-Mikulicz, Bd. 1.

In a few suitable cases the mucous membrane of the mouth in the vicinity of the excised areas may be utilized to cover the defect. We have already referred to Halsted's unique experience when he attempted to relieve cicatricial trismus by transplanting a fresh nonpediculated graft from the mouth of a dog to that of a boy suffering with this defect. I am not aware that the final outcome of this experiment has ever been published, but it is evidently an extremely uncertain method, which offers little prospects of practical results. In regard to the autogenic mucous grafts, Bayer has covered a defect in the cheeks by covering it with a mucous flap transplanted from the hard palate. In a case of carcinoma of the cheek, Oberst succeeded in overcoming the defect by cutting out two pediculated flaps from the inner (mucous) surface of the upper and lower lips respectively. He split the cheek to the masseter, extirpated the neoplasm and dissected the flaps from the upper and lower lips on their inner surfaces, sutured them together along their edges, leaving the raw surface outward, and the edges of the cheek-incision were closed over them. But these methods are of very limited application as compared with the cutaneous flaps, which are generally accessible and are far more manageable.

MYOTOMIES AND MYOPLASTIES.

In the second group of procedures that have been suggested and applied for the relief of cicatricial ankylosis, we should mention the division of the muscles of mastication or the detachment of their tendinous insertions with the object of creating more advantageous points of attachment and thus increasing the mobility of the lower jaw. It is doubtful that any permanent results can be obtained solely by myologic sections or reimplantations, except in cases of purely myopathic occlusion of the jaws. Such cases are reported in the literature in which good effects have been claimed, but the operations were either too recent when reported to prove the permanent success of the method adopted, or the procedures have been applied to cases in which the cicatricial contractions involved only the anterior region of the mouth and cheeks. In other instances the myotomies have been assisted by making a section of the jaw and creating a false joint, which is the really effective agent.

Gurdon Buck (1840), J. Carnochan (1846), J. R. Wood of New York (1850), J. W. Schmidt of Boston (1854), Müller and Little of New York, were among the first surgeons to report cases of tenotomy and division of the masseter and temporal for the relief of cicatricial constriction of the jaws in this country. The surgeons of other countries have reported a number of observations. LeDentu, in a more recent period, obtained a satisfactory result in a case in which the rigidity of the jaws was apparently caused by permanent contraction of the masseter and internal pterygoid, by making an incision along the angle of the jaw, through which he detached the masseter from its lower insertion as high up as possible; the adhesions of the mucosa to the body and ramus were also detached, and the internal pterygoid was also mobilized with a periostome. After these parts had been freely mobilized, he was able to open the mouth with a gag and kept the jaws wide apart for several weeks until the muscles had become permanently inserted at a higher point of attachment.

More frequently, sections of the muscles (masseter, temporal) have been made with the view of interposing muscular and aponeurotic flaps between the sections of the lower jaw, which is divided at the angle or at the ramus with the view of creating a false joint. In order to prevent the subsequent union of the fragments, muscular flaps borrowed from the masseter and pterygoids are interposed and sutured between the edges of the divided bone to insure the permanency of the pseudarthrosis. Verneuil first suggested this modification of Esmarch's operation and Helferich has adopted the same idea, in cases of true ankylosis of the temporomaxillary joint, by turning down a flap of the temporal after excision of the condyle. Lenz, Mikulicz, Riegner, Henle and Rochet have reported good results from this combined myo-osteoplasty.

OSSEOUS SECTIONS AND OSTEOPLASTIC OPERATIONS.

Sections of the lower jaw have been made through the condyle, the coronoid process, ramus and the body of the jaw. More frequently the temporomaxillary articulation has been excised or a linear section of the body (Rizzoli) or a cuneiform excision of the body (Esmarch) on a level with the angle, and including the angle, are now made, with the view of creating a pseudarthrosis.

Rhea Barton of Philadelphia was the first to suggest osteotomy for the relief of ankylosis in orthopedic surgery. Berard first suggested osteotomy of the condyle in ankylosis of the jaw. Carnochan, Richet, Dieffenbach took up the same idea and favored it about 1846. W. Grube[8] is credited as the first, according to Mathé (quoted by F. Gunyon[9]), to perform an osteotomy of the ramus for ankylosis of the jaws by intrabuccal section, in 1863.

A. Cabot of Boston and Koenig have clearly defined the indications for temporomaxillary excision. Baumgartner, Küster, Kraske and Bergmann have contributed modifications in the operative technic, which are more or less advantageous. Excision of the temporomaxillary joint is now restricted to cases of true ankylosis of this joint, and the myoplasties which have been suggested by Verneuil and others previously referred to, simply aim at the prevention of recurrence of the ankylosis by the new formation of bone tissue between the excised fragments. The most decisive step in the operative treatment of cicatricial constriction was not made until Esmarch and Rizzoli almost simultaneously and independently of each other suggested and performed, in 1854 and 1857, the operations which bear their names. The object of both operators was to create a false joint in the body of the lower jaw in front of the unyielding cicatricial bands. Esmarch removed a section of bone and Rizzoli made a linear osteotomy. The two procedures have been variously modified, but Esmarch's operation is the one generally preferred, as it is the most certain to prevent a reunion of the bone fragments. The modification first suggested by Bruns, Bonnet, Wagner and Heath, by which a triangular piece of bone is removed from the body of the jaw, including the angle, is the one now preferred. The operation is best performed by external incision and without opening the mouth (Levrat). The Gigli saw is particularly well adapted for this purpose. The external incision will also permit the masseter and external pterygoid to be detached from their insertions as a preliminary to the excision of the angle.

The immediate results of this operation are strikingly satisfactory in mobilizing the jaw; but in order to obtain the best results in long-standing cases, as in

8. Arch. f. Klin. Chir., Berlin, 1863, iv, 165-182.
9. Dict. Encycloped. des Science. Méd. (Déchambre).

the instance here reported, the cicatricial tissue in the mouth must be excised and a flap of skin, transplanted from the nearest hairless region into the mouth, must be substituted for the missing or contracted mucosa. In bilateral cicatricial cases involving the deeper regions of the oral cavity, a combination of methods is indicated.

The selection of the method in each case must be made judiciously, according to the special conditions existing in the case. It must be remembered, however, in making Esmarch's pseudarthrosis that a false joint should be made on one side only, and that nothing is gained by a bilateral section of the body of the jaw. This has been done by some surgeons, but it is evident that they have overlooked the fundamental fact that by the division of the jaw on both sides by osteotomy not only is the nutrition of the middle fragment greatly impaired, so that it becomes an easy prey to infection and necrotic changes, but that all control of the isolated middle piece and the capacity to chew food, and even to open the mouth and close it, voluntarily, is greatly impaired, because of the separation and isolation of the middle fragment from the muscles of mastication. It is, therefore, important, in all bilateral cases, to limit the formation of a false joint to one side only, so that the function of the masseter, pterygoid and temporal of the other side may be maintained. The removal of the anterior cicatricial bands and substitution of dermal flaps by autoplasty will usually suffice to give to the patient motion and control of the jaw. Should more motion be required, the excision of the condyle, part of the ramus of the jaw (without injuring the temporal and pterygoid) on the side opposite the pseudarthrosis, will give room for the play of the muscles of mastication by increasing the temporomaxillary space. This last expedient is, however, only justifiable in cicatricial ankylosis of the grave osteogenic type herein described.

GENERAL CONCLUSIONS.

In cicatricial constriction of the jaw, the operative treatment must be guided by a full knowledge of the seat of the constricting bands; their extent, their density and their association with secondary developmental defects or associate lesions in the osseous, articular and muscular apparatus of the lower jaw. The age of the patient, the cause of the lesion, duration of the trismic condition, the seat and extent of the cicatrices, whether extra- or intra-buccal, are the most important elements in determining the final results of the operative treatment.

2. The most intractable and difficult cases are those in which the lesions are symmetric and bilateral, which begin in inflammatory and necrogenic processes in the mucous membrane of the retrovestibular and pterygoid regions of the mouth in early childhood, and are neglected until atrophic, degenerative and developmental changes in the maxilla and its condyle have taken place.

3. The best results are obtained by early and persistent treatment.

4. In the complex and neglected cases of the class referred to (intrabuccal), no single operative method is sufficient to obtain permanent relief. The cases involving the anterior portion of the mouth and cheek are the most favorable for treatment, and the simple method of division of the cicatrices suggested by Mears will probably suffice. In the deeper or retrobuccal cases, a combination of methods, including autoplastic skin transplantations, osseous sections, with the creation of an unilateral pseudarthrosis (Esmarch), with or without myoplasty, will be required to obtain a moderate, but advantageous, degree of motion of the lower jaw.

5. Simple plastic operations to replace the lost mucous membrane by transplanting skin are necessary, but not sufficient in the deeper posterior bilateral cicatricial contractions. They must be regarded solely as adjuncts to the formation of a pseudarthrosis.

6. In making a false joint by Esmarch's or Rizzoli's method, it is important that the procedure should be limited to one side only, because a bilateral pseudarthrosis will result simply in increasing the mobility of the intervening fragment, with loss of voluntary control. The best results are obtained by unilateral pseudarthrosis, combined with bilateral plastic dermal transplantations, to which may be added, in the gravest cases, excision of the maxillary condyle on the side opposite the pseudarthrosis, without damaging the temporal, pterygoid or masseteric attachments.

7. By the combination of the methods above presented and a prolonged course of maxillary gymnastics following osteoplasty, functional results may be obtained, even in the most forbidding cases, without, however, the expectation of attaining the surgical ideal, either as to cosmetic or functional results.

CLINICAL OBSERVATION.

E. S., age 28, white, male, farmer, was admitted to the Charity Hospital Nov. 14, 1900. The patient is a native of Louisiana; single; of good habits and gives an excellent family history; father and mother both living and healthy; has four sisters and five brothers all living and well. Has never had gonorrhea or syphilis and has never been addicted to alcohol. When 7 years old he had a fever which was called "brain fever," and during the treatment was given calomel, which caused a violent stomatitis and salivation followed by deep ulceration on both sides of the mouth and especially the inner surfaces of both cheeks. It was two months before his mouth was well, and after healing he found that he was unable to open his jaws in consequence of the cicatricial contraction of the mucous membrane. When 17 years old he had malarial fever and he was treated with calomel with the result that he was again salivated, leaving ulcers in his mouth which healed in two weeks. After these had healed his mouth was more firmly closed than ever and he had great difficulty in feeding himself. When he was 25 years of age he was again sick with malarial fever, and was once more treated with calomel, which was followed by the usual salivation and an ulcerative stomatitis which lasted several days. Since that time the original contraction of the mouth which had completely immobilized his jaws had greatly altered his physiognomy and had compelled him to subsist purely on fluid and semifluid foods. In 1898 a physician made an incision over the left condyle of the lower jaw, probably with the intention of resecting the condyle, but there is no evidence to show that this was accomplished. Several efforts were made at various times to force his mouth open by mechanical means, but nothing was obtained by these efforts except to cause him to lose several of his teeth.

Jan. 15, 1901, he was again admitted to the Charity Hospital and examined for the first time by the writer. The general examination showed a healthy man, apparently fairly well nourished, about 5 feet 5 inches in height and weighing about 125 pounds. The face at once attracted attention by the small and undeveloped appearance of the chin and by the immobility of the lower jaw, which gave a fixed, rigid and set expression to the face. The angles of the mouth were drawn down and were adherent, especially on the left side, to the lower jaw by a distinct synechial band. The front teeth (incisors and canines) were irregular, notched, carious and incrusted with tartar. They projected for a considerable distance in a forward and oblique direction over those of the lower set, which were even more irregular, carious and stained

by calcareous deposits and tobacco juice. The gums were ulcerated and retracted from the teeth. A tendency to salivary dribbling was noticeable at the angles of the mouth. The chin receded and was small, contrasting with the upper half of the face, which was well developed; the hair of the beard, of a light sandy color, was scant and there was scarcely any growth of hair on the chin or lips. The cheeks were rounded and fully developed, contrasting in this way with the smallness and infantile appearance of the chin and lower jaw. The patient spoke without moving the jaws, and this gave his speech a peculiar and indistinct enunciation. The jaws were so firmly set that the point of a pocket penknife could scarcely be inserted flatwise between the front teeth. On attempting to explore the mouth with the fingers it was found that the entrance to the vestibule was blocked, on a level with the canines, by the existence of extensive cicatricial bands, which, beginning at the angles of the mouth, prevented further access to the space between the cheek and teeth on both sides. The back teeth and molars appeared to be in absolute contact. A probe could not be passed between the rows of the back teeth and only penetrated to the end of the vestibule by keeping it in close contact with the bicuspids and molars. Not the least impression could be made on the lower jaw by any manipulation. Evidently the inner surface of both cheeks was lined by a cicatricial mass, which had entirely replaced the normal mucosa. It was remarkable in this case, as in other reported instances, that the general nutrition had been maintained throughout the long period of twenty years that this condition had lasted, and that the patient had not suffered a great loss of body weight in spite of the notable interference with alimentation. This was partly accounted for by the fact that the patient had lost several of his teeth and had succeeded in feeding himself with milk, eggs, cereals, soups and other soft foods, such as chopped meats, which he crowded into his mouth with the help of his fingers.

In view of the extremely aggravated condition thus presented to us, the existence of a bilateral and extensive symmetrical constriction produced by cicatricial bands which had entirely replaced the mucosa of the vestibule and of the cheeks, and also of the atrophied, rudimentary and undeveloped state of the lower jaw and of the entire masticatory apparatus—we were undecided for a while as to the best course to pursue. It was plain that nothing could be accomplished by the usual mechanical methods of separating the jaws or of dividing the cicatrices by the simple intrabuccal methods recommended by some writers, more especially by Mears, as there was absolutely no room for any intra-oral manipulations. Nevertheless, after further deliberation I decided to divide the cicatricial masses on both sides by the procedure originally suggested by G. Jäsche, who described it nearly a half century ago, and which permits not only of a free visual exploration of the mouth, but also favors a substitution of the flexible skin of the cheek for the rigid and unyielding scar tissue after this has been divided and excised. This procedure appeared to be particularly applicable in his case, as the redundancy of the cheeks afforded an abundance of material for plastic work.

First Operation.—Feb. 1, 1901, the first stage of Jäsche's operation was undertaken. After a preliminary administration of one-quarter grain of morphin hypodermically, the cheeks were infiltrated along the line of the proposed incision from the angle of the mouth to the masseter, a little below the middle line of the cheek. The cutaneous incision was mapped out with an intradermal injection of one-fifth of 1 per cent. Schleich solution, and the subcutaneous tissue was made tense by massive infiltration of a 0.2 per cent. eucain B. isotonic saline solution injected with the author's infiltration apparatus. The dense tissues lying between the mucosa of the mouth, the ascending ramus of the jaw and the masseter were also infiltrated with the help of a long needle attached to the apparatus. An incision was then made which completely divided the cheek and opened the buccal cavity from the mouth to the anterior border of the ascending ramus of the lower jaw (Fig. 1). In doing this it was found that the mucous lining of the cheek had been completely replaced by a dense, thick scar tissue, which became harder as the ascending ramus of the jaw was approached. It was very difficult to divide this dense fibrous tissue with a knife, and as the end of the vestibular space was reached it was found necessary to resort to the sharp edge of a McEwen chisel to divide the scar tissue, which on the level with the last molars was found ossified and forming a bony bridge which clamped the two jaws and held them together as a single piece from one alveolar process to the other. By using the chisel freely the ossified tissue was divided and a considerable part of it was excised and removed. The cheek of the right side was anesthetized and treated in the same manner, the osseous bridge and scar tissue existing to the same extent as on the opposite side. After this had been done it was found the narrow space between the cheek and teeth was filled with a soft calculous mass formed by a mixture of tartar, stagnant food and precipitated tobacco juice, all of which had accumulated and formed a thick magma in this inaccessible space. After removing this stagnant mass on both sides we were able to explore the mouth and investigate the condition and relations of the teeth more satisfactorily. By insinuating the edge of the chisel behind the molars we divided all constricting bands and ossified masses to the ramus of the jaw, and by using the chisel as a lever we were soon able to pry open the jaw sufficiently to explore the interior of the mouth and determine the full extent of the constricting lesion. By further use of a

Fig. 1.—First stage of Jäsche's operation shown in profile. Incision from angle of mouth to anterior border of masseter.

conical dilator and by forcible manipulation with the hands we succeeded in separating the jaws 2½ inches apart, but we desisted from further efforts at this point for fear of breaking the delicate and undeveloped lower jaw.

After opening the mouth freely in this way we were at once struck by the vicious attitude of the permanent molars and bicuspids. In the twenty years that the constriction had existed the eruption of the permanent teeth had evidently been interfered with, and they had grown upward in an oblique direction, finally assuming a horizontal position so that the normal axis of each tooth was set at right angles to the alveolar margin; thus the grinding surfaces of the teeth were all turned toward the interior of the mouth. This abnormal attitude was much more marked in the lower than in the upper teeth. Having now obtained as much separation as was practically necessary for alimentation, we completed the first step of Jäsche's operation by suturing the cutaneous edges of the divided cheek flaps with the relics of mucosa and dense tissue which covered the upper and lower alveolar processes at the gingivobuccal junction. This was done with some difficulty, as the sutures would cut through the scar tissue whenever they were tied with even moderate tension. We therefore found it necessary to support the tissues by packing the large buccal clefts that we had created on each side of the mouth with strips of iodoform gauze and holding these in place with adhesive straps. Fortunately, on account of the abundance of skin covering the cheeks, there was no tension.

we had little difficulty in maintaining the flaps inverted into the mouth until healing had taken place.

In the course of a few weeks the skin of the cheeks had united with the gums throughout the whole line of incision, and the appearance of the patient was that of a man with a huge oral cleft or macrostoma which extended from one masseter to the other (Fig. 2). After healing had taken place systematic efforts were made to widen the interspace between the jaws with the view of stretching the contracted and shortened muscles of mastication and of increasing as much as possible the impaired mobility of the lower maxillary. For this purpose several contrivances were used. In addition to the usual mouth gags (conical and Goodwillie's) a special contrivance by which elastic traction could be made on the lower jaw with rubber tubing was found particularly beneficial. This most effective appliance was used as follows: A heavy piece of rubber tubing 3½ feet long by ½ inch in diameter was stretched over the mouth in the cleft as far back as possible, behind the last molar so as to fit like a bit in a horse's mouth; the free ends of the tube were then crossed as a figure of 8 back

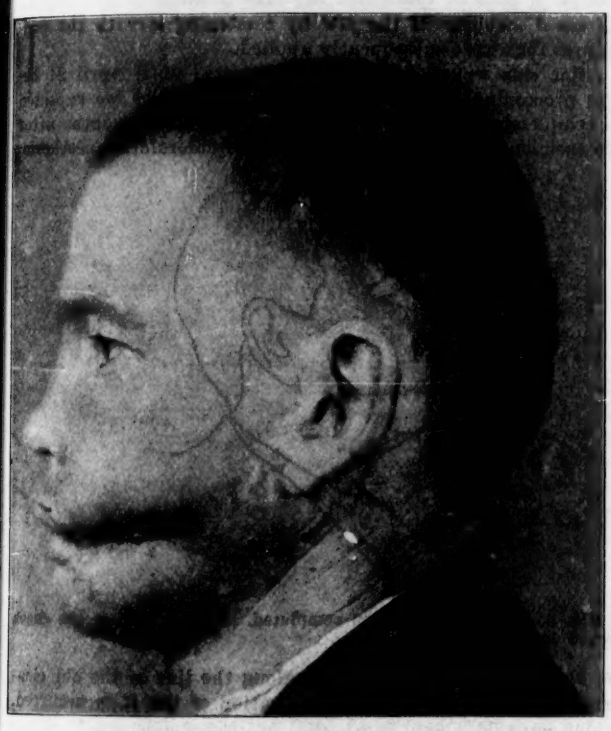

Fig. 2.—Profile, showing result after first stage of Jäsche's operation; a macrostoma or oral cleft remains as an extension of the mouth on both sides, to the masseter; the skin edges of the cleft are attached to the gums and vestibule of the mouth.

of the neck and each end again carried down in front of the chest on each side, below each axilla, and tied over the back of the chest while the rubber was stretched (Fig. 3). The immediate effect of this was to cause a flexure of the head on the neck and chest, but by forcibly extending the head backward while the patient was in a horizontal position the elastic tension made on the lower jaw caused the mouth to open to the widest possible extent compatible with the resistance of the muscles of mastication. By persisting in the fullest extended attitude of the head all muscular resistance was gradually overcome and even ligamentous tissues yielded and the maximum amount of separation of the jaws was obtained with the least amount of traumatism or suffering to the patient. Whenever the patient would tire of the extension he would simply flex the head and the elastic tension would at once diminish sufficiently to give relief. In this way elastic extension could be kept up intermittently for periods of half an hour or more at a time, thus securing the benefits of prolonged treatment, which he learned to apply himself with decided advantage.

The patient gave us the benefit of his most conscientious cooperation throughout the long duration of the treatment, and his patience, courage and willingness to help us were most admirable and inspired us constantly in our efforts to improve his unfortunate condition. During the two years that he remained at the hospital he was subjected to six operations. He became attached to the service and rendered most valuable help as an assistant nurse, and in this way we were given a most favorable opportunity to follow his progress and the effects of treatment.

On May 30, nearly five months after the division of the cheeks and separation of the jaws, the patient had made so

Fig. 3.—Separation of the jaws after division of the cheeks and scar tissue on both sides; first stage of Jäsche's operation (from a photograph).

much progress and was able to take nourishment so well and masticate all foods that we decided to complete Jäsche's operation by finally closing the gap in the cheek and restoring the mouth to its normal dimensions. This operation was performed under chloroform anesthesia May 30. Chloroform was given on this occasion because there was no longer the risk that was associated with the administration of a general anesthetic in a case of constricted and trismic jaws. Had we

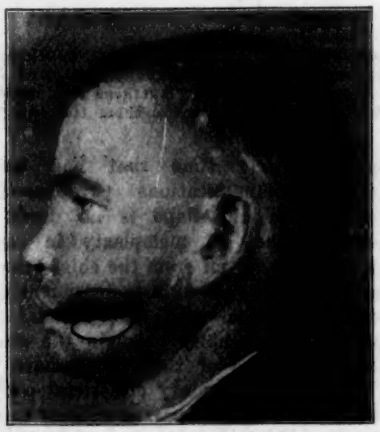

Fig. 4.—Second stage of Jäsche's operation. Two semilunar flaps are dissected from the cheek on each side of the oral cleft. These flaps remain attached to the gums and alveolar borders on each side of the cleft; the free edges are turned down from the cheek.

given a general anesthetic when the jaws were locked, and had vomiting, extreme salivation or bronchorrhea occurred, the patient would have incurred great risk of suffocation and death from a blocking of the larynx before we could have been able to divide the cicatrices and open the mouth. The choice of an anesthetic is therefore a matter of more than usual concern in such cases, and the advantages of local anesthesia by infiltration are well worthy of consideration. After the mobility of the lower jaw had been secured the

special risks of a general anesthetic were eliminated and we did not hesitate to administer chloroform, which the patient took quickly and well.

The second step of Jäsche's operation consisted essentially in cutting two semilunar flaps (Fig. 4) from the upper and lower margins of the buccal cleft, each flap extending at its fixed or attached portion from the angle of the mouth to the end of the newly-formed cheek gap. After dissecting these flaps they were turned into the mouth in such a manner that the epidermal surface faced the interior of the mouth and formed the inner lining of the cheek, the raw surface looking outward (Fig. 5). The fixed edge remained attached to the gums and alveolar processes; the free margins were sutured together with fine chromic catgut, thus forming a complete cutaneous partition which replaced the lost mucosa of the cheek, the diaphragm thus formed also acting as a barrier to the secretions of the mouth and preventing their entrance into the cheek wound. The external incision in the cheek was then readily closed by a series of interrupted catgut sutures (Fig. 6). This procedure was successfully applied to both cheeks and the mouth was restored to its normal appearance and dimensions.

The external wound healed per primam and the inverted flaps in the mouth united *in situ* in the right cheek, but the flaps of the left side sloughed away, in consequence, no doubt, of the defective vascular supply which held it to the gums

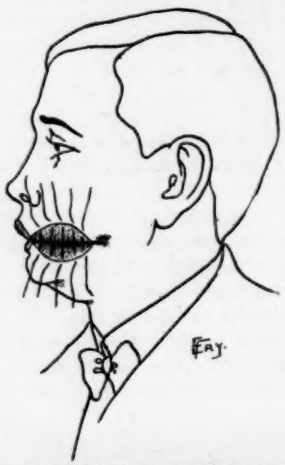

Fig. 5.—Second stage of Jäsche's operation, continued. The diagram shows the free edges of the cheek flaps sutured in the mouth to replace the lost mucosa; the raw surfaces look outward and are subsequently covered by suturing over them the raw edges of the cheek incision.

notwithstanding the long time that had been allowed to form nutritive communications (five months). This liability to necrosis of the flaps is no doubt the weak point in Jäsche's method of meloplasty in cases of this kind, when the flaps are cut off from the chief base of vascular supply and the nutrition of the skin is dependent solely on adhesions recently contracted with a cicatricial and poorly nourished base, such as usually exist in the scar tissue of the gums. In consequence of this unfortunate loss of the skin flaps on one side a secondary cicatricial contracture inevitably followed, and with it a partial relapse to the original condition of constriction that compelled us to resort to other expedients for the patient's relief.

From May 30, 1901, to Feb. 22, 1902, nothing further was done. The mouth and cheeks had healed completely and the patient was able to separate the jaws to some extent, but not more than half an inch in a vertical direction between the front teeth; the lateral motion remained improved, but was still greatly limited on account of the marked contraction of the left inner cheek, which had returned nearly to the condition existing prior to the Jäsche operation.

Therefore, in February, 1902, we decided that before undertaking any further plastic work with the view of correcting the remaining cicatricial contraction in the left cheek, we would increase the general mobility of the lower jaw by excising the right condyle and a part of the ascending ramus, leaving the coronoid attachment of the temporal muscle intact, thus making more space for the play of this muscle and the masseter, which were irremediably atrophied and shortened by early interference with the development and function of the maxilla.

The right temporomaxillary joint was excised and a large section of the ascending ramus of the jaw was also removed subperiosteally, leaving a considerable gap in the bone, which shortened the distance between the zygomatic arch and angle of the jaw on that side, thus approximating the points of attachment of the masseter and temporal without interfering with the periosteal attachment of the pterygoids. This wound healed kindly and without bad effects, as the branches of the facial nerve had been carefully protected throughout the operation. On the other hand, very little benefit was appreciable as far as the mobility of the jaw was concerned in view of the persistence of the cicatricial contraction of the left cheek, which prevented any exhibition of improved motion. Nevertheless, I have reason to believe that the extensive resection of bone at this point has been of value in favoring an increased mobility of the jaw by combining it with the procedures that were subsequently applied.

After this wound had healed we waited until April 21 before proceeding to the final operations by which we expected to completely mobilize the jaw. April 21 (two months after the excision of the right condyle), under chloroform anesthesia,

Fig. 6.—Jäsche's operation completed. The incision in the cheek closed by suture.

we again divided the left cheek along the line of the old cicatrix and at once a very fair separation of the jaws occurred, which gave us a gain of at least one and a half inches in the space between the front teeth. Fearing now that in spite of the splicing of a new and pediculated skin flap in the cheek that secondary contraction would take place, we decided to create a pseudarthrosis at the left angle of the lower jaw by excising a wedge-shaped piece of the maxilla at this point. This was done by Esmarch's method modified as follows: A horizontal incision about 2½ inches long was made parallel with the horizontal ramus of the jaw and terminating at the angle, around which it curved upward, gently following its contour. All the soft parts were cut down to the periosteum, and the angle of the jaw was divided subperiosteally without disturbing the tendinous attachments of the masseter or pterygoid. The angle of the jaw was completely separated from the rami in two sections, one vertical, through the horizontal ramus, and the other a cross section through the ascending ramus, by passing a Gigli saw subperiosteally around the jaw at these points. The periosteal capsule was then divided at this point and the severed bone sections were separately covered with periosteum. This procedure not only protected the exposed bone surfaces, but effectively prevented a future restoration of the continuity of the jaw at this point, the musculo-aponeurotic expansions of the masseter and the external pterygoid being sutured together in the interspace between the divided bone surface. The effect of this newly-created point of motion in

increasing the general mobility of the lower jaw was very marked indeed, and we felt confident that if we could only succeed in preventing the formation of a retractile cicatrix in the mouth that a permanent and satisfactory mobilization of the jaw would be obtained. Therefore, at the same sitting we undertook a plastic restoration of the cheek somewhat like the method suggested first by C. Gussenbauer in 1877, by which a long, well-nourished, pediculated skin flap dissected from the hairless part of the neck is transplanted into the mouth as a lining for the cheek. A flap 3½ inches in length by 1¼ inches in breadth was dissected from the neck and freely mobilized with its pedicle attached to the face close to the terminus of the gap in the cheek. The flap was turned on itself, and its entire edge was sutured to the inner surface

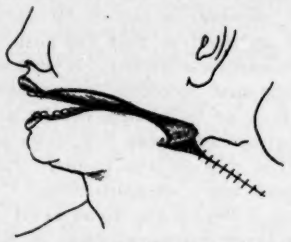

Fig. 7.—First stage of the modified Gussenbauer operation. The skin flap from the neck is turned into the oral cleft so that the skin edge is sutured to the inner raw surface of the cleft corresponding to the upper lip; the raw surface of the flap is also allowed to contract adhesions with the gum and cheek of the upper side of the cleft. After vascular connections have been formed the flap is turned completely into the mouth, as shown in Fig. 8.

of the vestibule from the angle of the mouth and along the inner border of the upper cheek flap. The lower edge of the transplanted flap was not sutured to the inner surface of the lower half of the cheek and the raw surface of the pediculated flap was thus allowed to come in contact with the thick raw surface of the upper half of the cheek (Fig. 7). Nothing further was done to close the gap in the mouth and this stage of the meloplasty was ended by simply closing the wound left in the neck after the transplantation of the pediculated graft.

The division of this plastic operation in two stages was adopted in this case because we were anxious to avoid the

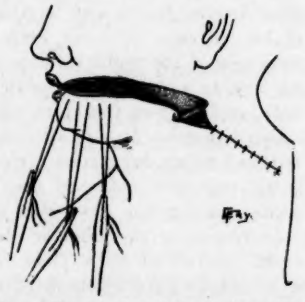

Fig. 8.—After firm adhesion has taken place, the transplanted flap is partially detached from the upper edge of the cheek cleft, leaving the gum line attached. The dermal surface of the flap looks into the mouth; the raw surface of the lower edge is brought into apposition with the raw inner surface of the lower cheek cleft. The two raw surfaces (of the cheek and of the flap) are brought together by a series of transfixion sutures (mattress type), which are tied externally over small pads of gauze.

risk of a second failure from sloughing, owing to defective vascular connections in the gums and mouth; we feared that in spite of the apparently abundant blood supply that came to the transplanted flap through its pedicle, that necrosis of its edges might occur from partial strangulation and infection if the flap was sutured in the mouth and the cheek closed over it. As a result of these precautions we had the satisfaction of seeing the transplanted flaps firmly united along the entire line of attachment to the inner surface of the cheek, where it remained in a well-nourished condition for the following six months. It was not until Nov. 22, 1902, that we undertook the final closure of the gap in the cheek, and this was done as follows:

The transplanted flap which had become firmly adherent throughout its attachment to the intrabuccal surface of the inner cheek was carefully detached from the cutaneous margin of the cheek cleft, leaving the upper skin surface of the graft attached to the gum and vestibule of the mouth. The lower half of the original skin incision was detached from the gum line and the lower border of the graft was inserted in the gingivobuccal groove and held firmly in place by a series of through-and-through mattress sutures, which held the raw surfaces of the graft and inner raw surface of the cheek in apposition (Fig. 8). The sutures (silkworm) were inserted with the Reverdin needle and the free ends of each suture were tied over a small pad of gauze on the outer surface of the cheek. After thus securing a complete apposition of the raw surfaces the cutaneous covering of the graft made a smooth lining for the inner surface of the cheek. The external incision in the cheek was closed over the graft by interrupted silkworm sutures throughout its length, except at its terminal (masseteric) end, where the pedicle of the graft was allowed to remain undivided, so as to insure its nutrition until a firm union had been obtained (Fig. 9).

Dec. 8, 1902, seventeen days after the cheek had been closed and no further doubt existed as to the vitality of the transplanted flap, and the success of the operation had been assured by the complete healing of the entire wound, we

Fig. 9.—Appearance of face after suture of the cheeks in the modified Gussenbauer operation performed in this case. After suturing the cheek the pedicle alone remains to indicate the existence of the dermal flap, which has been transplanted from the neck into the mouth to replace the lost mucosa.

cocainized the pedicle and excised it, leaving a space at the terminus of the cheek incision, which was closed with a few catgut sutures. On the third day the wound had healed and the patient was well.

The patient remained in the hospital of his own accord until Jan. 8, 1903, when he was finally discharged to return home (Fig. 10).

Briefly summarizing the operative treatment of this case, we find that the patient was under observation at the hospital for a period of two years, from Jan. 15, 1901, to Jan. 8, 1903, and that during this time six operations were performed. The first operation (Feb. 1, 1901) was a complete through-and-through section of each cheek, including the division and incision of all cicatricial and ossified bands; separation of the jaws and suturing of the skin of the cheek to the gums, thus creating a huge oral cleft, or macrostoma (Figs. 1-3).

Second operation (May 30, 1901): Closure of the cheek gap by Jäsche's meloplasty. Third operation (Feb. 22, 1902): Excision of right condyle and part of ramus of the jaw. Fourth operation (April 31, 1902): Esmarch's cuneiform excision of the left angle of the lower jaw, to create a pseudarthrosis at this point; also

first stage of modified Gussenbauer's meloplasty. Fifth operation (Nov. 20, 1902); Gussenbauer's meloplasty completed by leaving pediculated neck graft in the mouth. Sixth operation (Dec. 8, 1902): Division of the pedicle of the transplanted flap and final closure of the cheek incision.

The final results obtained by these various operations and the protracted treatment associated with them was fairly satisfactory, and justified the sacrifices made by the patient in obtaining relief for what appeared in the start to be an absolutely irremediable condition. The chief object aimed at was to restore to the patient the ability to open his mouth, eat and chew food by increasing the capacity of the mouth and restoring the lost motion of the lower jaw. This object was to a large extent attained without entailing any serious sacrifice of his appearance, which had already been seriously affected by the disease. When he was admitted to the hospital the front teeth could not be separated to the extent of admitting the blade of a penknife introduced flatwise. When he was discharged he could separate his front teeth more than an inch apart. He could move his jaws laterally quite freely, and could eat and chew any ordinary article of diet without difficulty. While freely recognizing that all facial scars should be avoided in correcting deformities of this kind, it is evident that when dealing with a case of this type cosmetic considerations must be relegated to a secondary plane, and that restoration of the lost maxillary function must be given the prime consideration.

Fig. 10.—Photograph of the patient at the time of discharge from hospital. The pedicle had been divided and all incisions had healed.

DISCUSSION.

DR. JOHN B. MURPHY, Chicago—This condition of ankylosis is a most trying one for the patient and for the surgeon. I have had the good fortune to have two of these cases. One of them was the result of ulcerative stomatitis, which destroyed all the tissues of the cheek except the skin. The cheek was one cicatricial mass, and the muscles were destroyed clear back to the angle of the jaw. The treatment consisted of division of the fibrous mass and excision of the scar tissue on each side up to the base of the teeth. The first thing that was done after making the incision through the growth was the complete removal of the cicatricial tissue through the mouth. A flap was turned back from the neck below the chin, with its base below the ear. It was drawn into the mouth through a small incision in the cheek at the angle of the jaw, then turned on itself so that the skin came against the teeth and the raw surface outward. It was sutured above and below to the gums and iodoform gauze packed between the teeth and the flap, so as to make a perfect apposition between the cheek and the surface of the flap, thus placing the cutaneous surface of the flap on the inside. The result was excellent and without much disfigurement.

The second case followed the removal of a large angioma, which had left a large cicatricial mass so firm as to displace the teeth inward in a straight line. The teeth stood in a straight row from the angle of the left jaw to the right bicuspid. Through an incision from the angle of the mouth to the angle of the jaw I removed all the cicatricial tissue except the skin. Portions of the angioma still remained. I made the reverse type of flap from the skin of the neck, sutured the edges to the gums and closed the incision in the mouth; the cheek was packed with iodoform gauze. I succeeded in this last case, which I considered the more desperate, in getting a very movable jaw.

In neither case did we have the pain and other complications preceding the operation which Dr. Matas had in his cases, and I desire to compliment him on his work on these cases.

DR. J. R. EASTMAN, Indianapolis—I have had under my observation during the winter, a case of cicatricial ankylosis of the jaw which may be interesting to the members of the Section because of its rather unusual etiology. The case concerned a boy 7 years of age, who gave a negative anamnesis except that he recalled having fallen and having sustained what was described by his parents to have been a slight superficial injury at the angle of the right inferior maxilla. It was impossible for the boy to separate the jaws more than one-sixteenth of an inch, and he was therefore unable to take any other than liquid nourishment. It was also impossible to force open the mouth without using dangerous force.

There was a small scar and reddened area at the angle of the jaw. On making an incision over this scar and passing my finger along the ramus of the inferior maxilla I came on a hard object which proved to be a piece of wood one and one-fourth inches in length by one-fourth of an inch in thickness, jammed in between the ramus of the inferior maxillary and the superior maxillary bone. It was imbedded in scar and granulation tissue, which had become very dense. I removed the wood with a pair of forceps, and was immediately able to open the boy's mouth with slight force as wide as one-half inch. He has been able to chew food of all kinds, and I have not at this time advised further operation, though I am not unmindful that scar formation may make a plastic operation necessary.

DR. E. D. MARTIN, New Orleans—The last case recalls one of a severe head injury, where pus had dissected down on either side of the scalp until the masseter muscles were seriously impaired and cicatricial contraction followed. This case I was enabled to cure by a very simple device. I had made for him an apparatus resembling a glove-stretcher. This he carried in his pocket, and in his odd moments would put it between his teeth and with a little force succeeded finally in stretching his jaws to their full capacity.

If I had a case so complicated as the one reported by Dr. Matas I should not hesitate to remove the lower jaw. We

know how satisfactory the results are in cases where the jaw is removed for sarcoma, and especially when a temporary splint has been kept in position until the wound has cicatricized. This would preserve the orbicular muscles and give, in my opinion, far better control of the normal structures.

DR. A. J. OCHSNER, Chicago—I wish to call attention in connection with this discussion to one point which became apparent to me in one of my own cases. It is this: that a deformity of the lower jaw, and especially of the teeth such as that encountered in Dr. Matas' case, will disappear to a very great extent in growing children, if the operation is performed while the child is young. In an operation which I did on a child six years ago, within a year the lower jaw grew and the new teeth came in properly and the appearance of the child is now very nearly normal. I think it is better to do the operation while the child is still young, because the deformity can be corrected to a considerable extent, provided the jaw and the teeth are not hampered in their growth by the pressure which is due to connective tissue.

DR. RUDOLPH MATAS, New Orleans—There is no doubt of the great value of plastic flaps in operations of this character as substitutes for the lost mucosa of the mouth, though their value has been doubted by some writers. Without the skin, which is fortunately quite available in the vicinity of the mouth, there would be no hope of ever restoring the mobility of the jaws in grave cases of this cicatricial type. The cheeks, forehead or neck offer the best material for skin transplantation. The skin ultimately assumes the characters of the mucosa, especially when borrowed from normal hairless parts. I am much pleased that Dr. Murphy's experience has confirmed my own. Dr. Eastman and Dr. Martin have recorded interesting cases. Dr. Martin's mode of separating the jaws is valuable, but not applicable to cases like the one under consideration. His suggestion that the removal of the jaw would be expedient in a case like the one reported is entirely too drastic. It is impossible to conceive how excision could in any way better the situation of such a patient. There is no question that my patient's condition is infinitely better now with a plastic that yields restricted motion than without a lower jaw, or with an artificial jaw, as an artificial jaw, no matter how ingenious it might be, could never take the place of even a fragment of healthy maxilla. I entirely agree with Dr. Ochsner's remark that these cases should be operated on early to obtain the best results. I did not see my patient until he was 27 years of age, when permanent atrophic change in the bones and muscles had taken place and when developmental defects in the eruption of the permanent teeth had made the task of a perfect restoration a practical impossibility. Had the operation been performed twenty-five years before, I am confident very little traumatism would have been required to effect a cure. Nevertheless, when we consider the extreme conditions under which treatment was undertaken, the results must be considered highly satisfactory.

SURGICAL TREATMENT OF HIGH MYOPIA.

(SECOND PAPER.)*

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In an essay delivered before the Western Ophthalmological and Otolaryngological Association at New Orleans, Feb. 10, 1899, and published by Drs. Würdemann and Murray in the *Annals of Ophthalmology*, April, 1899, the authors noted the rarity of high myopia in America and the relative frequency of this condition in the ophthalmic statistical reports of Germany and other European countries. A number of statistical tables were given in this paper which have been amplified and are herewith appended. These are taken entirely from the authors' private practice during the last fourteen years, in which 10,500 pairs of glasses have been prescribed, this, of course, including renewals of prescriptions. The following table shows the refraction of 4,690 eyes under a cycloplegic:

TABLE OF CASES UP TO JAN. 1, 1899.

Refraction.	No. of Cases.	Percentage.	Percentage.
Myopia	172	3.7	
M. As.	190	4.0	17.3
Comp. M. As.	451	9.6	
Hyperopia	1,148	24.4	
H. As.	512	10.9	76.7
Comp. H. As.	1,942	41.4	
Mixed As.	275	6.0	6.0
Total	4,690	100.0	100.0

In addition to these there were 755 eyes fitted for presbyopia without the use of a cycloplegic.

The following table shows the refraction of 3,331 eyes and includes those in which complete examination under cycloplegic was made, and 861 eyes examined without cycloplegic in persons over 45 years of age:

TABLE OF CASES FROM JAN. 1, 1899, TO JAN. 1, 1903.

Refraction.	No. of Cases.	Percentage.	Percentage.
Myopia	110	4.45	
M. As.	56	2.26	16.02
Comp. M. As.	230	9.31	
Hyperopia	529	21.42	
H. As.	320	12.96	75.60
Comp. H. As.	1,018	41.22	
Mixed As.	207	8.38	8.38
Total	2,470	100.00	100.00
Presbyopia	861		
	3,331		

Out of the above number of 7,160 eyes refracted under a cycloplegic there are only 282, or 3.9 per cent., of simple myopia; and including simple myopia, myopic astigmatism and compound myopic astigmatism there are only 1,209 eyes, or 16.9 per cent., with myopia. Of the total number of eyes refracted, 8,776, there were only 78 eyes of myopia over 10.00 D. (0.888 per cent.). Operation has been suggested in 4 instances and accepted in 3 (6 eyes), and the result in the 6 eyes operated on has been extremely satisfactory, although each operation was much more complicated than ordinary cataract extraction.

But few of the high myopic cases were adapted for operation, as the large proportion achieved comfortable and useful vision by proper correction of the refraction. It will be observed in most cases that the high myopia was accompanied by a considerable degree of astigmatism. It is likely that the many operations done for high myopia by our foreign confrères need not have been undertaken if they had corrected the accompanying astigmatism which was the greatest factor of discomfort. In other cases marked deviation of the visual axes existed, as is usually the condition in myopia (that of divergence). A marked example of the benefits derived from the correction of the full refraction and of the muscular deviation was the following case:

CASE A.—Sister D. (a nun of Notre Dame Convent), Milwaukee, July 25, 1899, presented an unusual picture of very high myopia with internal strabismus. She was wearing, R.—15.00⌒ prism 10° base out; L.—15.00⌒ prism 10° base out, fitted by an optician. With these she had homonymous diplopia with the red glass of 25° and left hyperphoria of 4°. The full refraction was, R.—20.00⌒—1.00, 90°; V.=6/xxxvi; L.—17.00, V.=6/xxiv; by adding prism 10° out with prism 4° down over the R. eye and prism 15° out over the L. eye, monocular vision could be obtained, but with no combination of lenses could easy or useful vision be given to both or either eye and the patient preferred to do without any glasses. Op-

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

erative work being suggested August 1, was accepted, the first step in which was to restore the visual axes to as near parallelism as possible; this being done by full tenotomies of both internal recti and advancement of the left external rectus. Monocular vision was immediately achieved, there being immediate exophoria of 2°. August 16 there was orthophoria in the distance; August 22, glasses were prescribed, R.—20.00⌒—1.00, 90°; L.—17.00, for distance and occasional use, and for the near was ordered, R.—16.00⌒—1.00, 90°; L.—13.00; for constant and near use. With these, to this date, she has had satisfactory vision and use of the eyes.

An example of the pursuance of vocation in high myopia without refractive correction, the patient refusing it, was the following:

CASE B.—March 7, 1892, M. D., age 40, seamstress; vision 0² counting fingers at 2 m., could read ordinary print by holding book very close to face, which posture she habitually maintained while working; had tried many times to get refractive correction. R.—11.00⌒0.50, 90°, V.=2/lx; L.—11.00⌒—2.00, 130°, V.=6/lx. These were ordered but were not tolerated; distance glasses changed later to R.—6.00⌒—0.50, 50°; L.—6.00⌒—2.00, 130°. Reading glasses were later ordered, R.—4.00, L.—4.00⌒—2.00, 130°, which were, as well as the other lenses ordered, asserted by the patient to be of no use. She has been under observation about every two years on account of recurrent deafness from inspissated cerumen and has tried no other glasses but gets along well in her business as head seamstress of a large department store and re-

TABLE OF MYOPIC CASES—10.00 D. OR OVER.

No.	Sex.	Age.	Vision.	Refraction.	V. After Refract.	Condition of Fundus and Media.	Treatment.
1	F...	15	O² Fings. 1 m	O.D.–15 00 O.S.–14 00	Not given...	Not given.	Glasses ordered.
2	F..	30	" " "	O.D.–15 00 O.S.–11 00	6/xviii 6, xxxvi	Patches of atrophy in choroid.	Full correction for dist., +4.00 added for near.
3	F...		" " "	O²–16.00	O² 6/xxxvi.	Not given.	Ord. O² –13 00.
4	F..		" " "	O²–14.00⌒–1.00, 180°	Not given.	" "	+6 00 added for near.
5	M..	41	Fingers, 2 m. " 1½ m.	O.D.–8 00. O.S.–11 00	" "	" "	1½° L. H. lens decent. down.
6	F..		O² " 2 m	O.D.–11 00⌒–50, 45° O.S.–11 00⌒ 2 00, 130°	" "	" "	Full correction for dist., +5.00 added for near.
7	F...	60	" " ½ m.	O.D.– 9 00⌒ 1 00, 135° O.S.–13 00⌒–4.00, 105°	O² 6/xl	Extensive central choroidal disease with large staphyloma in O.D.	+6.00 added for near.
8	M..	35	" " ½ m.	O.D.–11 00 O.S.–7 00⌒ 1 00, 165°	O² 6/x..	Slight choroiditis, some opacities in vitreous.	11° diplopia hetero-omous pr. 6° base in ord., +3 00 added for near.
9	M..	23	" " 2 m.	O.D. 11 00⌒ 1 25, 165° (1894) O.S –9.00⌒ 1 75, 15° O.D.– 14 00⌒–1.50, 15° (1901) O.S.–12 00⌒–1.75, 180°	O² 5/x. O² 5/x.	Progressive myopia, some choroiditis.	Full correction not tolerated, +3.00 added and worn constantly.
10	F. .	30	" ½ m. " 3 m.	O²–16 00	Not given...	O.D. conical cornea, 37.00 D. at 180°.	Glasses ordered.
11	F...	20	Not given. .	O² 16.00	" "	Not given.	" "
12	F...	60	Fingers. 2 m " 3 m.	O.D.–12.00. O.S.–10 00	" "	" "	Glasses ordered, +4.00 added for near.
13	F...	21	Not given...	O.D –10.00⌒–2 00, 180° O.S.–10 00⌒ 2.00, 180°	5/xl 5/xxv.	Optic nerve atrophy, V. F., right especially reduced.	+1.00 added to full correction.
14	F...	9	6/xxxvi 6/lx	O.D –11 00 O.S. 11 00	O² 5/xxxv.	Not given.	Glasses ordered.
15	F...	20	1/lx 1/cxx	O.D.–14 00⌒–3 00, 15° O.S.–20 00⌒ 3 00, 165°	=5/x. =5/xii.	O.D. slight post staphyloma; O.S. large post staphyloma.	Full correction for dist., +3.00 added for near.
16	F. .	26	O² 1/lx.	O.D.–10 00⌒–1 50, 180° O.S. 10 00⌒ 1 50, 180°	=5/x. =?	O. S. optic nerve atrophy	Full correction for dist., +3.00 added for near.
17	F...	48	O² 1/lx.	O.D.–5 00⌒ 8.00, 15° O.S. 10 00⌒–5.00, 180°	O² 3/xxxvi(?),	Hydrops cornea, from old staphyloma due to ophthalmia neonatorum.	Ordered O² –9.00.
18	F...	37	O² 1/lx.	O² 13.00	O² 5/xii.	Post staphyloma.	Full correction for dist., +3.00 added for near.
19	F...	19	O² 1/lx.	O.D.–16 00⌒–3 50, 180° (1897) O.S. –14.00⌒–1 25, 180° O.D.–17 00⌒–2.75, 180° (1898) O S.–16 0 ⌒–1 50, 180°	O.D.6/xxxvi O.S.6/xxiv.	Large conus in O²	+4.00 added for near, adv. op. which was accepted.
20	F. .	63	Not given. .	O.D.–17 00 O.S.–13.00	6/xxiv. 6/xxxvi.	Post-staphyl. vitreous opac., beginning lenticular opac.	Full correction for dist., +4.00 added for near.
21	F...	52	O² 5/l.	O.D.–11 00 O S.–5 50.	6/xxiv. 6/xv ii.	Old corneal macula O².	Full correction for dist., +2.50 added for near.
22	F...	33	Fingers, 1 m. 6/xx	O.D.–18 00. O.S.–12 2⌒–75, 75°	–6/lx –6/vi	Not given.	O.D. not corrected.
23	M..	18	Large objects. Fingers 2 m.	O.D.–16 00 O.S.–16 00	Large objects. 6/xxiv	Staphyloma, central chorio-retinitis, O D. optic nerve atrophy.	Full correction for dist., +4.00 added for near.
24	F...	31	Not given. .	O.D.–12 00⌒–1.50. 165° O.S. 12 00⌒	O² 6/xviii.	O² large staphyloma.	Full correction ordered, +6 00 added for near.
25	M..	38	Not given. .	O.D.–13 00⌒–1 25, 15° O.S.–13 00⌒–1 25, 180°	6/lx +6/lx	Lateral nystagmus.	Full correction ordered.
26	F...	37	O² finger, ½ m.	O.D.–20 00⌒–1 00, 90° O.S –17 00	6/xxxvi 6/xxiv.	Internal strabismus, homon. diplopia 25°.	Tenot. and full correct. for distance, +4.00 added for near.
27	F...	63	Not given. .	O D.–13 00⌒–0 37, 480° O.S.–13 00⌒–1.25, 180°	6/xxiv.	Staphyloma choroiditis	+1 00 added to full correction, +4.00 added for near.
28	F...	31	6/vi Fingers, 1 m.	O.D.+0 37, 90° O.S. 10 00⌒–1.50, 30°	6/vi 6/xxiv.		Full correction ordered.
29	M..	42	Fingers, 2 m Fingers, ½ m	O²–16.00	6/xxiv.	Small retinal detachment on O.S., post. staphyloma O².	O² –12 00.
30	M..	39	Fingers, ½ m Fingers, 2 m.	O² –17.00	Improved sl.	Choroiditis and vitreous opac. O², retinal detach O.D.	Full correction ordered.
31	F,.	38	Not given. .	O.D.–15 00⌒–1 00. 15° O.S.–15 00⌒–1.00, 140°	–6/xii.	Large staphyloma, peripher. lenticular opacity O².	+1.00 added to full correction, +4.00 added for near.
32	F...	34	Not given. .	O² 18 00	Not given.	Choroidal change	Full correction ordered.
33	F..		2/lx 5/lx	O.D.–14 00⌒–1.25, 180° O.S.–14 00⌒ 1.50, 180°	" "	" "	" "
34	F. .	40	2/ x 4/lx	O.D.–16 00⌒–3.00, 180° O S.–13 00⌒ 1 50, 180°	6/viii		Could not tolerate glasses, operate (See report.)
35	F. .	37	Fingers, 2 m . 5/x.	O.D.–4 00⌒ 10 00, 180° O.S.+0.50⌒–2 00, 186°	6/xxxvi – 6/viii		Full correction ordered.
36	M..	35	O²–5/lx.	O D 5 00⌒–2 00, 155° O.S.–11 00	6/xxiv. +6/lx	Post. staphyloma, O.S. old trachoma.	Myopia not corrected.
37	F...	35	5/lx. 5/lx.	O.D.–10 00⌒ 1.50, 180° O S. 5.50⌒–0.25, 180°	6/xxxvi 6/vi.	Post. staphyloma.	Full correction ordered.
38	F. .	52	?	O²–20 00	Finger, 3 m.	O.D. degeneration and vitr's opacity.	–9.00 ord. for constant use.
39	M..	26	Not given. .	O.D. 10 00⌒–5 00, 180° O.S.–9 00⌒–7 00, 180°	Not given. " "	Macular retinitis from electric light.	Ord. No 2 smoked clips for wear over full correction.
40	F...	59	Not given. .	O D. 10 00 O.S –13 00	6/lx 6/xxv.	Retinal detachment, O.D. recurrent, retina returning to place.	+4.00 added for near.
41	F...	54	Not given. .	O²–18 00	Not given.	Cataract O².	Operation. (See report of case.)
42	F...	14	O² 6/lx	O.D. 12 00 O.S.–7.00.	6/xxiv. 6/viii	External strabismus post. staphyloma O.D.	Full correction ordered.
43	M..	28	Not given. .	O² 13 00	Improved sl.	Cataract O²: choroidal changes and retinal atrophy.	

fuses to try further correction of the refraction. In this case the patient prefers to utilize the blurred large images rather than the clearer smaller images given by correcting lenses, and as the myopia has not progressed during the dozen years she has been under observation, she has learned to adapt her blurred sight to her vocation and is otherwise a healthy woman. This is one of the few cases in which refractive correction may be dispensed with.

In the following cases the crystalline lenses were removed by operations:

CASE 1.—Miss J. L., aged 20, born in Norway, resident of Manitowoc, Wis., recommended by Dr. J. F. Pritchard; came to the office July 6, 1897. She had worn several pairs of glasses on account of shortsightedness, but had received no satisfaction on account of the eyestrain which occurred when she wore them.

Family History.—Father had good eyes, died of yellow fever in middle life; mother living and in good health, has always had weak eyes, but never worn glasses, has had only the one child.

Personal History.—Patient had pneumonia at the age of 2 years and again at 11, has never been strong and is now anemic, has always complained of weak eyes, has found it very difficult to study, has been very nearsighted since adolescence, has been employed as house servant.

Examination showed a high degree of myopia with well-developed conus in both eyes; no opacities of vitreous; ophthalmometric measurement showed corneal astigmatism R—2.75, 90°; L.—2.25, 105°; the refraction was R.—17.00⌒2.75, 180°; L.—16.00⌒—1.50, 180°; for which the following correction was given: R.—16.00⌒—2.50, 180°, V.=6/xxxvi; L.—14.00⌒—1.25, 180°, V.=6/xxxvi; reduction of 4.0 D. from spheres for close work was given. These glasses were better worn than those which she had been wearing, but she was unable with them to follow up her ambition to become a dressmaker.

Operation for removal of the lens was advised June 15, 1898, accepted, and patient sent to the hospital. Following day, discission of right lens capsule under holocain anesthesia and atropin mydriasis; but little reaction. July 2, 1898, a second discission was done which caused considerable reaction, although the patient was allowed to go home. July 14 she wrote she had great pain, anterior chamber shallow, lens decidedly swollen.

July 26 she came to the hospital, lens greatly swollen, disintegrating and bulging into anterior chamber; tension +2; lens matter was removed by linear incision under holocain anesthesia. A clear pupil immediately resulting. Further course was uneventful.

September 16 ophthalmometer showed corneal astigmatism in the eye operated on of 2.50, 105°. With +1.00⌒+2.00, 115°, V.=6/xxiv; with addition of +3.50 sphere, Sn. 1.0 was read at 0.50.

September 17 the effect of the operation having been satisfactory in the right eye, a discission was done on the left lens capsule which at first was followed by no reaction, but two weeks later the lens became so much swollen that tension and pain occurred, so that it was extracted October 1 by linear incision, which was followed by clear pupil. Further course uneventful.

November 15 a secondary operation was done on the capsule remaining in the right eye. At this time the ophthalmometer showed corneal astigmatism for the left eye 4.25, 75°. The refractive condition was R.+1.00⌒+2.00, 115°; V.=6/xxiv; L.+2.00⌒+3.00, 75°, V.=—6/xxiv. With these she has binocular vision and with the addition of +3.50 spheres, for the near point, can read Sn. 1.0 at 0.50.

Patient has been seen or has written several times since and expressed herself as being very well satisfied with the improvement of vision and with the increased use of the eyes which she has obtained through the effect of the operation. Under date of Dec. 21, 1898, she wrote us "that she could see first rate in the distance but not so well near by." It may be that readjustment of the reading glasses will satisfy her more completely. There has been no tendency toward any other complication than that from the excessive swelling of the lens and to this date the eyes are in very much better condition than before the operation.

Later the patient returned to the office complaining of "black spots" before the eyes, especially the left. Vision with correcting lenses was 6/xv, R. and L. Ophthalmoscopic examination showed a disseminated choroiditis, most marked in the left eye—probably a result of the pathologic condition present before extraction of the lens. Visual field contracted in both eyes. The patient was given an alterative and advised to use the eyes as little as possible for near work. She has since been lost from observation.

CASE 2.—April 28, 1900, Sister F. (a nun of Notre Dame Convent), aged 40; German descent, had been a nun for many years; high myopia and astigmatism, was wearing —11.00 spheres in both eyes fitted by local oculist; had had many pairs of glasses but had received no satisfaction on account of the accompanying eyestrain. Full refraction was R.—15.00 ⌒—3.00, 180°; L.—12.00⌒—1.50, 180°, which were ordered for her and likewise weaker pair for near use, but she was unable to wear any, preferring to do without glasses. Operation for the myopia was suggested and accepted, discission being done on the lens of the right eye May 18, 1900, and repeated six weeks later and subsequent discission of the capsule being made at the end of three months from the first operation when examination showed the eye to have the following refraction; R.+1.00⌒+1.25, 90°, V.=6/vi; October 27 discission was made on the left eye, and this repeated on Feb. 27, 1901, for opening of the capsule; April 30 the refraction of the right eye remained the same, while the left took +3.50⌒+1.50, 90°, with which V.=6/vi; +3.00 being added to this for the near gave comfortable reading vision. Aug. 26, 1901, there was no change in the glasses and the patient said she could see double with the left eye, which was evidently due to a strand of the capsule almost vertically across the pupil. This was discided, the irides were perfectly mobile to light and accommodation, the visual field was enlarged and the patient had satisfactory and clear vision.

CASE 3.—Oct. 22, 1902, Sister R. (Dominican nun), aged 54, high myopia with cataractous changes in both eyes which had been going on slowly for four years; there were vitreous opacities and in both eyes myopia —18.00 D., for which she was wearing —10.00 D. spheres, but without satisfaction; had been unable to read for a year, and had consulted a number of oculists. We advised extraction of the lens, and October 29 discission was first made on the right eye, the lens being found to be hard and quite movable; November 1, simple extraction of the right lens was made, the pupil being left clear and round. November 25 there was thick secondary cataract, which was discided December 21. The refraction on December 22 was R. +1.75, 180°, with which V.=6/xxii, and with +3.50 could read Snellen 0.25 at 25. For some time after the extraction she had purple vision, which entirely passed away. Jan. 1, 1903, simple extraction was made on the left eye, which was perfectly normal, but was followed by considerable hyphemia, the bleeding of the iris persisting for over three weeks, but finally becoming resorbed, and as the patient had good candle field and could count fingers, at this date discission of the capsule was made, which, on March 7, gave vision 6/xxxvi with +2.00. March 25 R.—50⌒+1.75, 180°, V.= 6/xii; L.+0.50⌒+2.25, 180°, V.=6/xxiv, with +3.50 she could read Sn. 1.50 at 25, R.—2.0 at 25, L; glasses ordered.

The results in all three cases have been most gratifying to the patients and the operators, despite their complicated course. In all cases we obtained the advantages which were shown in the paper read Feb. 10, 1899:

(1) Increase in the visual acuity; (2) enlargement of the retinal images; (3) enlargement of the visual field; (4) increased range for near work; (5) the wearing of light lenses instead of heavy strong spheric lenses, in a combination which permits of clearer and less distorted retinal images; (6) the pupil being brought

nearer the retina the eccentric visual rays are more excluded; (7) and most important, the more extended use of the eyes obtained by the patients; in all cases a new world having been opened to their view. Detachment of the retina has not occurred in any of these cases, and even if it should happen, the German statistics show that its occurrence is only in 5 per cent., and this is the percentage of cases of high myopia in which detachment occurs without operation. We will repeat the résumé given in our previous paper, which we have had no occasion to change:

RESUME.

1. Surgical treatment of myopia should be limited to those cases over —12.00 D. who suffer great inconvenience from their correcting lenses. The ideal cases for operation are those of —17.00 to —18.00 D.

2. The operation is mainly indicated in young adults.

3. Cases having active disease and changes in the ocular structures, such as progressive myopia, chorioiditis, fluidity of the vitreous or detachment of the retina are not applicable.

4. The dangers of operative interference are more than counterbalanced by the results to be achieved, which are mainly, increase of visual acuity and of the visual field, and more extended use of the eyes which accompany diminishment of the refraction.

THE CAUSES, PREVENTION AND MANAGEMENT OF MYOPIA.*

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In presenting this subject for consideration, I feel that it is neither fitting nor just that I should discuss every phase of it. It is my purpose, however, to draw your fire, and in this way to have the subject thoroughly ventilated.

In the beginning, permit me to say that I shall discuss the management of myopia in those who are under the presbyopic age, for I conceive that it is during this period that we are confronted by the serious problems in the management of the shortsighted eye.

The initial proposition which I wish to set forth is: that the condition of emmetropia is the normal and natural refractive condition of the human eye. It is true that infants, as a rule, are born hyperopic, and, therefore, it must be true that if they happen to arrive at the condition of emmetropia, an elongation of the eyeball along its anteroposterior axis occurs.

Emmetropia, therefore, under these circumstances, is an acquired condition. Now, if it is the purpose of Nature that all infants should be born hyperopic, it must be her purpose further either that the growth of the eye anteroposteriorly should cease at the moment at which the emmetropic length is attained, or that the final destination of the eye should be myopia.

Since no thing or condition in Nature is stationary, it follows that constant change in the length of the eyeball is natural, and that the condition of emmetropia is a fleeting and a transitory one. This line of reasoning places our philosophy almost in the realm of transcendentalism, and it is the basis of those who claim that the ideal eye is hyperopic; that emmetropia is a step, an intermediary one indeed, if not the first step toward myopia. I can not accept this interpretation as a practical basis, and I feel compelled to regard the emmetropic eye as the ideal one to which all eyes that differ from it should be reduced. This conclusion is not strictly logical, but is eminently practical, and is necessary in this discussion.

I regard the myopic eye as a vicious, diseased organ, with a constant tendency to increase in its anteroposterior diameter. It is likewise more subject to structural changes at its posterior pole than other eyes. It is a part of a reasonable therapeusis, therefore, to prevent the occurrence of myopia, to prevent its increase when it has occurred, or to reduce its increase to the minimum.

As has been stated, the physical cause of myopia is the elongation of the eyeball in its anteroposterior axis. The causes of this can be divided into those which are predisposing and those which are direct.

Permit me first to refer to the direct cause. I think it is safe to say that two theories are held on this point. One may be called the accommodative hypothesis and the other the convergence hypothesis.

Antecedent to the paper of Foerster, which appeared in *Knapp and Schwerger's Archives*, in 1884, the accommodative hypothesis had universal sway; but in 1884 Foerster set forth the reasonable claims of the convergence hypothesis as opposed to the accommodative hypothesis, in explanation of the cause of the development of myopia.

For my own part, I can not see how any one can adhere to the accommodative theory, either on the ground of philosophy or practical experience. In discussing the relative merits of these two theories, Foerster pointed out that if the elongation of the eye were caused by the muscular action of the tensor of the choroid, myopia would carry with itself its own infallible and invincible remedy; for the simple reason that work demanded of the accommodative apparatus decreases as the myopia increases. All this ceases the moment we look for the origin and increase of myopia in the excessive convergence of the visual axes. As the nearsightedness increases, the convergence of the visual axes increases, while simultaneously its claims on the tensor of the choroid decreases, which is practically the corollary to the initial proposition.

The persistent increase of myopia the moment it has attained a relatively high degree harmonizes, therefore, precisely with the increased angle of convergence. Foerster discarded the accommodative theory, and plainly pronounced himself in favor of the convergence hypothesis. His article contained the histories of a large number of cases which tend to support his views.

In convergence of the eyes for a near point there is pressure on the sides of the ball by the external muscles, and the nearer the object looked at the greater is the pressure. At the same time, there is necessarily a determination of blood to each eye, in conformity with that physiologic rule which demands the presence of a greater quantity of blood during physiologic activity than during physiologic rest. Unquestionably, then, these conditions might reasonably tend to produce myopia.

We are, perhaps, in some respects indebted to Von Graefe for the accommodative view of the cause of increase in myopia. He observed that in the effort to accommodate there occurred an increased pulsation of the retinal veins. He reasoned from this that the active condition increased interocular tension and thereby conduced to increase the length of the ball.

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

That the eyeball itself should be increased in length by the act of accommodation in which there is a pull from the front on the back of the globe by an interior structure, is to me as unreasonable as that a man should be able to raise himself from the ground by pulling on his boot straps. I, therefore, accept the convergence hypothesis as the only reasonable one extant for the direct cause of increase in the length of the eyeball; and it is on this basis that I purpose to treat this subject.

It has been stated that the majority of eyes at birth are hyperopic. I think it is not straining a point to say that all eyes that are not macrophthalmic are hyperopic at birth. If the condition of myopia is to arise in these eyes, of course the condition of emmetropia is to be attained first.

Myopia rarely occurs in very early life; very rarely, indeed, does it occur under five years of age. And, in fact, I believe it can be said that in a large majority of cases it occurs after the child has commenced to use its eyes at school. The active study involves convergence of the visual axes; but I do not believe for one instant that this act alone will produce myopia. This reflection leads me to consider the predisposing causes of myopia.

I fancy no one will deny that myopia is particularly apt to occur in childhood after one or more of the exanthemata. I think scarlet fever and measles can be cited among these as claiming the largest number of victims. Subsequent to these diseases, the vitality of the patient is very much lowered. The entire muscular power of the body is diminished and, I think, particularly the accommodative power. The natural impulse to convergence degenerates into an effort. Along with that comes the congestion of tissues whose vitality has been weakened.

Most children are inclined to hold their books nearer than is necessary, and the younger the child, the nearer is the book apt to be held. The squeezing of the lateral muscles supplemented by congestion of naturally yielding tissues incident to childhood, fulfills the necessary conditions that favor the increase in the length of the eye. I cite the exanthemata because they, I believe, are the most frequent of the predisposing causes of myopia in childhood, and I cite them as types. Similar causes will produce similar conditions.

It is an accepted fact that heredity is a predisposing cause in the development of myopia. If a mother or a father in a family be myopic, and there are several children, myopia is most likely to develop in one or more of them. And it appears to be a fact, in my experience, that the mother is more apt to transmit myopia than the father.

Illumination and a proper text for books may be cited here. In schoolrooms the desks should be so arranged that the light, if possible, should always fall from the left, for obvious reasons. Moreover, the inclination of the desk should be such that the visual lines from the eyes when the head is held in almost an erect posture should strike the plane of the desk at right angles. This will obviate and possibly remove the habit so many children have of bending over their books.

This leads me to mention the importance of posture. The head should not be bent; it should be held almost erect; and the book, if it is read in the hand, should be held in front of the eye, and very nearly on the same plane as the eye.

The character of the illumination by night I conceive to be of the greatest importance. I can not condemn too strongly the use of the unfrosted electric bulb, which permits the eye to see the carbon wire. This, under all circumstances, will produce an after-image which is wearisome and irritating, and produces congestion of the entire ocular structures. If the electric bulb is used, and the bulb is within the field of vision, it should be at least frosted so that the carbon wire can not be seen.

I also desire to register here my condemnation of the Welsbach white light, which produces an exceedingly fierce light, in which I can not fail to detect some of the blue elements of the spectrum. This light is to me exceedingly disagreeable and produces distinct discomfort when used as an illumination for reading.

The best illumination for study, in my opinion, is the so-called German student's lamp, or the Argand gas burner, over which a green shade is placed. The source of illumination should be toward the left of the individual and below the level of the eyes, so that the light is reflected on the paper and again reflected to the eyes.

The slightly yellow light of the oil lamp, and even the Argand burner, give a wave length which is apparently grateful to the eye; and the further it is from the red end of the spectrum, without becoming green, the more grateful it appears to be.

The characteristic text of our schoolbooks and other books is gradually becoming larger and the linear spaces greater. There is to-day no longer any need or necessity for the small forms of print, and it will be an advantageous thing for the human eye when they have been relegated to the historic past.

I firmly believe that the high percentage of myopia in Germany is due as much to the universally abominable illumination there as to the German type. Luckily, nowadays, a large number of the German scientific books are being printed in the Latin text, and if the homes of the people could be illuminated so well even as the homes of our poorer classes, I believe there would be seen a diminution of myopia in Germany in the near future.

As a matter of course, an attempt to read in a reclining posture is a frequent cause of the increase of myopia. In this position there is the greatest possible strain on the lateral muscles.

Any general systemic condition which is inclined to cause congestion of the head tends to favoring the production of myopia; eminently, for example, constipation; and in early childhood this irregularity should be carefully watched and abated.

Owing to the vigilance and wisdom of our surgeons in this country, much has been done to prevent conditions at school and in home life which lead to the production of myopia in our children. A continued crusade along these lines will effect still more beneficent results.

Heredity, however, is harder to be combated, so far as it itself is concerned. But it behooves every intelligent surgeon who has under his care children with this predisposition to lay down the most rigorous rules for the care and conduct of the eyes of such children.

During convalescence from any form of sickness, children should not be permitted to go to school until all symptoms and signs have disappeared, and until they have regained their former strength and vitality. Even then their study should be graduated in quantity, and the number of hours of study should be cut down.

In this connection I can not refrain from condemning that which is so prevalent to-day in our schools,

namely, the making on children of demands inconsistent with reason and their ability, so that by the time a girl or a boy retires for the night, she or he has in one way or another employed the eyes from eight to twelve hours a day. Physicians should instruct parents and families in this matter; and the sight should be spared at the expense of useless and superfluous information. A fair amount of knowledge and perfect eyesight is preferable to extraordinary knowledge with strained eyesight and amblyopia.

The matter lies more in the hands of the general practitioner than in those of the specialist, for it is to the latter that the victim first comes.

Let us, then, assume that myopia has arisen in a child under the age of 15 years. What course should we pursue? So far as the correction of the refraction is concerned, three courses lie before us: the total correction of the myopia, the under correction, or no correction.

The total correction of this error is demanded on the convergence hypothesis, and is directly contraindicated on the accommodative hypothesis. Conversely, the under correction of the error or its non-correction is demanded on the accommodative hypothesis and contraindicated on the convergence hypothesis. Which one is to be pursued? It is fair to assume that that treatment is the best which is dictated by reason and fortified by statistics and authority.

I have already declared myself a distinct believer in the convergence hypothesis, and have given the reasons for my belief; therefore, by virtue of opinion I am compromised to the convergence hypothesis and the treatment by full correction. I shall not consider the question of non-correction at all. It appears to me that sufficient statistics have been compiled even at present in favor of the convergence hypothesis to demand the earnest attention of those who oppose it, if not to bring conviction, as to its correctness. The weight of authority, I believe, to-day is in favor of full correction. In the Heidelberg Congress of 1901, the majority of those present spoke in favor of full correction, and it is my ardent desire that a full discussion of this important subject should set forth the views of all those present. Dr. Edward Jackson has presented to this Society the result of his investigations along this line as far back as 1892. He reported the histories of 62 cases treated by full correction—the average period of observation for each case being about 5½ years. In these cases there were 123 eyes, one being blind with congenital cataract. During the above-mentioned period of time, 93 out of 123 eyes remained practically unchanged in the matter of refraction. In 10 eyes there was an increase, .50 D.S.; in 3, the myopia was diminished, .50 D.; in 13, the myopia increased more than .50 D., the average being 1.5 D.; in 4 eyes, the myopia was diminished more than .50 D., the average being 1 D. The visual acuity diminished in 6 eyes to a very slight degree; in 16 the visual acuity was markedly increased, and in a few it was doubled. These statistics have latterly been supplemented by others equally striking.

Over against these let us place those of Schreiter, Roscher and Meyerhof, in uncorrected or under-corrected myopia. Their patients were mostly under 20 years of age. Schreiter found less than 21 per cent. stationary in an average of 6 years of observation. Roscher found 39 per cent. of non-increase and Meyerhof 38 per cent. The latter two had their patients under observation for about four years. If one compares these statistics with those of Jackson, in which 75.6 per cent. remained stationary, such figures will carry their own weight and need no support.

These facts are supplemented forcibly by the statistics of Pfalz and Heine, presented at the Heidelberg Congress in 1901. The statistics presented by these men were overwhelmingly in favor of full correction. Fuchs, von Hippel, Axenfeld, Uhthoff and many others spoke in favor of full correction. When we remember that the former treatment of under correction or no correction of myopia found its greatest supporters among Germans, the incident becomes singularly significant.

Knapp has expressed himself in favor of full correction of myopia when there is good vision and no fundus changes present.

Over against this weight of evidence stands the views of Koenigshoefer, who is a strong advocate of under correction.

Liebreich has expressed some original views as to the physical cause of myopia. He considers it due to increased interpupillary distance caused by a separation of the orbits. He claims that this osseous malformation produces a disturbance in the correlation between accommodation and convergence which, of course, causes an increase in the angle B. He thinks total correction achieves good results only in those cases in which the angle B is either very small or normal.

It is safe to say that sufficient statistics have not been brought forward in this matter, and herein is a loophole for the disciples of under correction. It is hoped that the interest in the matter will be so stirred that careful statistics of all cases of myopia under treatment will be compiled, and the principles at issue be settled beyond peradventure.

Widmark of Stockholm has called attention to the influence of corneal opacities in causing an increase of myopia when it is present or its production when astigmatism is associated with the opacities. He has observed, however, that the production of myopia or its increase generally occurs in that eye which is free from opacities, and in case there is astigmatism in each, he has observed that myopia arises in the less astigmatic eye. While he favors the convergence rather than the accommodative hypothesis, he conceives that myopia produced by opacities of the cornea, as above described, can not be explained on the convergence hypothesis. It appears to me that his observations were strong proof in favor of the convergence hypothesis. The opacities in the cornea induce the patient to hold the work nearer to the eye; this perforce increases the convergence of the visual axes and excessive congestion of the better eye—ideal conditions for the production of myopia on the basis of the views expressed in this paper. His conclusions seem to me to negative his reasoning and his observations.

Foerster concluded that three things were necessary in correcting myopia; the first was a full and proper correction, the second, the proper position of the eyes in work, and the third, the use of abducting prisms to force the near point outward in binocular vision.

The first two propositions are eminently reasonable, but the third I consider superrogatory, and this latter suggestion of his is characteristic of all those who propose new ideas. It seems reasonable enough that there should be a full and complete correction, but the use of abducting prisms points, in my opinion, lies in the direction of overdoing the matter.

For my own part, I regret I have not kept my records carefully enough to enable me to back my opinion, concerning the full correction of myopia, by statistics. Yet, after all, statistics are in many ways deceptive because it is practically impossible to collate uniformly similar cases. The weight of the evidence, in my experience, has been overwhelmingly in favor of full correction, though I do not think the rule can be said to be hard and fast.

I commenced to give the full correction in myopia in 1886, and I have continued to do so under proper conditions to this date. It requires no patriarchal experience to remember the day when the full correction was never given and when even the myopic laity entertained definite views on the subject. To-day at times one meets patients who still give some evidence of their attachment to those views.

It has frequently happened to me to be compelled to combat these views in the mothers and fathers of children—so strongly and widely was the old idea of under correction promulgated by the elder practitioners. It is not possible for me to say to what degree I correct myopia in all cases. Each case I consider a law unto itself. I have known some people, even adults, who accept and wear with perfect ease for distance, glasses which would not for a moment be tolerated by another with an equal error.

Suffice it to say, I correct myopia in children to the limit, if possible, and I force them to wear the glasses for reading and for near work. I consider this necessary in low degrees of myopia as well as in high. Now, I do not mean that every individual should be forced to wear the full correction glass which is indicated by retinoscopy or the direct method, but he should be made to wear the weakest glass found by the test case with which he gets the best vision with the most comfort; this I consider full correction.

It is obviously absurd to force on a patient a correction which is estimated by objective methods of examination alone. The functional method with the test case is the crucial test, and its decision should guide us. There must, however, be a reasonable relationship between all methods.

In those cases in which the degree of myopia in the two eyes differs considerably in amount, it is my custom, as a rule, to give the glass which corrects the less myopic eye to both eyes. I find that this is uniformly more agreeable than correcting each eye separately. This can hardly be said to be full correction in a true sense, but it amounts to that, and is in the way of my rule, viz.: the weakest glasses which give the best vision with the greatest comfort to both eyes.

Of course, the far point should always be thrust as near as possible to infinity, i. e., to say to twenty feet. But in the majority of cases it is not well to give the stronger glass if a weaker glass will give the same visual result, because the sharper visual image furnished by the stronger glass causes the patient discomfort. I do not believe that the cause of this lies in the increased accommodation. I believe it is an inherent quality in some retinæ. It is obvious, then, that the weakest glass which gives the best vision compatible with comfort is the strongest glass which will be tolerated. I am accustomed to ask the patients if the glasses feel "soft." This word seems to convey the proper idea to them. There seems to be a uniform conviction that full correction ought not to be worn where fundus changes, particularly choroidal ones, are present. For a long time I held this to be an exception to my views of full correction, but one case which I shall relate has caused me to give as full a correction as possible in many of these cases.

A woman, aged between 35 and 40, had a high-graded myopia with extensive posterior staphyloma in each eye and marked changes at the macula in the left eye. She had been under the care of a surgeon in a neighboring city, who held the old views about the correction of myopia. He cautioned her against any correction at all, but gave her a weak pair of lenses with which she could see very little better at a distance than without any, and told her to read without glasses. She could not enjoy the pleasures of reading, nor the theater, nor could she go about the streets by herself without great danger. This had persisted for at least ten years. The loss of sight, and particularly detachment of retina, was held up to her as a check on her ambition to be more comfortable, and so she sat and held her hands. In her right eye she had 20/30 vision with —11 D.S.⌒ —1. S.D. with ax. 90°; in her left, 20/200 vision, with —11 D.

After the use of atropin for a week, I gave her the above correction for distance, and at the end of another week I gave her a reading glass; in the right eye, —7 D.S. ⌒ the cylindrical correction, and in the left, —7 D.S. She tolerated both glasses well and has worn this correction for five years. At first I demanded she should increase her reading gradually in this wise: the first day she was to read fifteen minutes, the second 30 minutes, the third three-quarters of an hour, and so on until she had attained two hours of steady reading. I was rigorous in this particular, and I customarily give these instructions to cases in which there is a high degree of myopia, and in which the full or the best possible correction has not been worn before. This lady, emboldened by the ease and comfort with which she sees far and near, has regularly taken each summer since a course at a summer university. Her whole method of life has been altered, and she is grateful. She was of uncertain age and so I gave her a reading glass. If she had been ten years younger I verily believe she would have accepted the same glass for distance and reading. Before the correction she was wont to have photopsies and muscæ volitantes. These symptoms practically disappeared under correction.

I am inclined to think that some lay too much stress on the matter of choroidal changes in the correction of myopia. I believe it is always well to proceed with such cases cautiously, and it is my custom to use a mydriatic for some time before prescribing, but I do not believe that the tension on the choroid necessarily caused in the act of accommodation has so serious an effect as is ordinarily believed. This case supports my views on this point fully, and I have had many similar ones in my practice.

As to the use of a mydriatic, I hold that it is well in all cases of choroidal lesion to employ atropin sulphate, and when the eyes have been kept in a condition of physiologic rest for an appropriate time to discontinue its use, and give the correction according to the principles I have set forth.

As to the use of homatropin, it is my custom to use this agent in simpler cases in which there is spasm of the accommodation or the asthenopic symptoms are particularly marked. I believe that the use of a mydriatic in all cases is not necessary. I also believe that a skillful ophthalmoscopist can, in the great majority of cases, adjust the glasses correctly without its use. *Per contra,* I believe the use of homatropin in every case will do no harm, and will lead more nearly to a correct adjustment. In some way I conceive that the constant and uniform use of homatropin is a refuge for the unskillful.

It is always my custom to make first an approximately quantitative diagnosis with the skiascope, to cor-

roborate it by the direct method, to scour the fundus with the indirect, to use the ophthalmometer next, and to hold all these methods in check by the test case. The correction by the skiascope alone is not practical, in my opinion. I place very little faith in this method alone, as a quantitative test. It takes too much time, is wearisome to the patient and the surgeon, and is open to other objections which it is not my purpose to set forth here. As a qualitative and an approximately quantitative method of examination, I consider it of the greatest service, but I never correct by it alone, nor could I rely on it against the findings of the other methods.

As a means of discovering the approximate axis of astigmatism, I have quite as much faith in it as I have in the ophthalmometer. In clinical work, I am accustomed to use Placido's disc, but I hold behind the aperture in one hand a + 4 D. spherical glass. As a rapid method of diagnosing the approximate axis in astigmatism, I consider this is exceedingly useful.

I conceive that in the correction of myopic astigmatism, as in spherical myopia, the weakest glass which affords the best vision, consistent with comfort, is the correct one to give.

I think, then, it can not be said that all cases of myopia, whether spherical or astigmatic, can or should be fully corrected, and in using the term, "full correction," or in advocating the principle, I desire to be understood as advocating the use of the weakest concave glass which gives the best vision and is, at the same time, compatible with the comfort of the patient. This, it will be observed, is distinctly adverse to habitual under correction, or no correction at all, and is consistent, in my opinion, with the principles involved in the convergence hypothesis.

I think I may sum up my views on this subject in the following manner:

1. Myopia is a condition in which there is an increase in the anteroposterior diameter of the eyeball. This condition is, except in very rare cases, acquired. It is a distinctly vicious process, and in the great majority of cases tends to increase. It should, therefore, be regarded as a disease. It usually begins in childhood.

2. Its causes may be divided into predisposing causes and a direct cause.

3. (*a*) The predisposing causes are, in general terms: Heredity, naturally lax conditions of the eye tunics in certain individuals; the injudicious use of the eyes after sickness, usually in children, after the exanthemata; bad illumination, improperly placed illumination, incorrect position in the act of reading; the existence of refractive errors, generally astigmatism, which is uncorrected or improperly corrected; corneal opacities; any systemic condition which tends to produce cerebral congestion, for example, constipation.

(*b*) The direct cause is an elongation of the eye on its anteroposterior axis, at the posterior pole, except in the case of corneal astigmatism.

4. When myopia has once been acquired, its increase is directly caused by the pressure on the globe by the extrinsic muscles, due to the convergence of the visual lines toward the far point—the convergence theory.

5. The weight of evidence and reason is distinctly against the accommodative theory.

6. Theoretically, full correction of the myopia is indicated, whereby the far point is thrust to infinity.

7. Practically, this is not always possible.

8. The far point should be thrust as far as possible toward infinity, but, at the same time, it should be compatible with the best vision and the greatest comfort.

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DISCUSSION

ON THE PAPERS OF DRS. WURDEMANN AND BLACK AND CLAIBORNE.

DR. EDWARD JACKSON, Denver—No fixed rules can be laid down, in my opinion, as to what cases are suitable for operation and what cases are not, and a very definite opinion on the advisability of operation can not be given in any case until it has been repeatedly seen and studied and the test lenses tried. I have so often seen lenses of 18 and 20 diopters worn with comfort for years that my experience with removal of the clear crystalline lens has been very small. I think, too, that the contraindications can not be stated very definitely, as any rules will have so many exceptions that they will lose the value of rules. Fundus changes are not necessarily a contraindication. If they are so extensive that perfect focusing of light on the retina will not give any improvement of vision, probably there would be no reason for an operation. If the eye is not in a good condition for operation, as having a recent choroiditis, or recent hemorrhages, an operation should not be done at that time. With reference to the vision, we can expect a certain improvement from the effect of bringing the nodal point forward from the retina by the operation; and that becomes a very important indication in cases where the acuteness of vision can be brought up by lenses to 1/6 or 1/8. If you can get vision of 1/6 or 1/8 with the lenses and the operation is successful and the case goes smoothly, there is a probability of bringing up the vision to a point where it will be very useful. Vision much lower than that, however, may be improved so as to be of great benefit. As to the effect of operation on refraction, it may be expected to increase for some months and sometimes for some years afterward. If myopia remains it will be still further reduced and if hyperopia, it will become greater. That corresponds to what occurs in cataract extraction. Diminution of refraction goes on after the changes of astigmatism have ceased. As to the methods of operating, one point should be emphasized; that is the care in making a moderate or small discission to commence with. While the effect of this on some eyes may be very slight and may entail some waiting, it is a great deal safer. I have had to take out for sympathetic ophthalmia an eye that had been lost by an operation for the removal of the lens. While I did not do the original operation, it was a free discission and was followed in twenty-four hours by severe swelling. Of course, if one be prepared to deliver the lens at any time after discission the serious damage may be obviated. Still after acute swelling the eye is not in as good condition for the removal of the lens as when the lens has been allowed to become opaque slowly. If the lens must be removed as soon as possible, it is better and safer to remove it without any discission whatever, even though a subsequent operation has to be done.

DR. A. B. HALE, Chicago—In my clinical work about 38 per cent. of the cases are myopic, as many of them are Russians and Poles. I have ten cases of operation that I have not yet reported in which the results have been very good. Where DR. Black gives the percentage he forgets that many cases of postoperative prolapse do not go into the records at all. I saw six cases last summer of postoperative prolapse that were not reported and heard of six others. Axenfeld, in a personal letter, says that he is not satisfied with the reports for the first six months, but is inclined to wait for one and a half or two years, as he had one prolapse two years after operation. I think we must accept statistics with a little less cheerfulness than they are presented to us.

DR. H. D. BRUNS, New Orleans—In about 2,500 cases of refraction I have operated seven times for the removal of the lens in high myopia. I reported three of these in the *American Journal of Ophthalmology*, 1898 and 1899, under the heading of "Cases from the Clinic." It seems to me that the greatest value of the operation is prophylactic. There is little chance of keeping a very high myopia in a young person stationary and we

have the greatest opportunity to rescue these individuals from helpless middle age, with the oncoming of cataractous changes later; and we all know how unfortunate operations on such cataracts are. All of my operations but one have been in patients under 18 years of age; that exception confirms what was said a moment ago about certain pathologic changes not being a contraindication. The discission was done to relieve the dull, incessant pain of a highly myopic eye with posterior staphyloma in a woman of 35. I operated in 1897 and the patient some years afterward was entirely free from pain, the disease had made no further progress and she was well satisfied with the result. I agree fully with what has been said about the moderateness of the discission and I think it holds true of all discissions. It is well to make a small discission and wait to see how the eye will tolerate it. I prefer safety with length of time to the loss of a well-seeing eye which I have counseled the patient to have operated on for his future good. That makes the loss of an eye a calamity indeed. The only case in which there was a bad reaction was one operated on by one of my assistants, which had to be extracted. The lens was too much broken up in the discission. A month of iridocyclitis followed. The patient was a little child 12 years of age with good eyes, except that she had 14 diopters of myopia, and I experienced such a bad 30 days that I have never since been tempted to try to gain time at the expense of absolute safety.

Dr. Melville Black, Denver—It seems to me that Nature makes a strong effort in high myopia toward prophylaxis that should be recognized. There is a tendency in all these cases to divergence due to inability of the interni to swing the eyes in. It would seem to me that it is well to recognize this effort on the part of Nature and not try too much to overcome it by giving the patient binocular single vision. I operated recently on a case with 20 diopters. It will not be my policy to operate on the other eye, for I prefer to have in this case as much disassociation of the eyes as possible. It will be impossible in this case for the patient to use the eyes together. I have given nothing for distance over the eye operated on, but have corrected the other eye by a minus 14 diopter lens, which can be worn for near work; thus the patient uses the eye operated on for distance and not the eye operated on for near work. I think that will tend to reduce the probabilities of increase in the myopia.

Dr. J. F. Fulton, St. Paul—I am so pleased with the results of discission that I do not see why extraction should ever be attempted. It is wonderful how rapidly the lens will be absorbed. Success consists in being extremely careful in the original discission. After that you can tear up the anterior capsule freely. The few cases I have operated on have been extremely satisfactory.

Dr. H. Moulton, Ft. Smith, Ark.—I believe in the full correction of myopia, but in cases in children we must secure the coöperation of the parents. Many parents do not do enough close work to understand or appreciate the insistence on suitable light and places of study for the children. It is difficult to get them to follow out our directions properly.

Dr. Oscar Dodd, Chicago—For the last few years I have been correcting my myopic cases in full and find that they are not only more comfortable, but, in following them up and having them come back for examination every six months, I find that nearly all remain stationary, while those cases I have seen which were not fully corrected made much greater changes. One point to be insisted on, I think, is the careful correction of the astigmatism. I had a case of high myopia not very long ago a man 39 years of age, that had been refracted by an oculist ten years before. In the course of a year he lost his reading glasses and had worn those intended for distance, —20 D., all of the time. I found that he took a —22 D. in one eye and —24 D. in the other to see in the distance sufficiently well to read the names on the street cars. I advised removal of the lenses, but at his age I was careful about promising a good result. He preferred to get along with an occasional use of the distance glasses.

Dr. G. E. de Schweinitz, Philadelphia—In all important particulars I agree with Dr. Claiborne. I believe that young persons under 25, with good vision and a moderate degree of myopia (under 6 D.) should wear the full correction of their refractive defect constantly, if accommodation is ample and no signs of fatigue are present. The same rule is applicable to patients until they reach those years when accommodation must necessarily receive help, or when examination shows that the amplitude of accommodation is not equal to the necessities of the patient's life. I agree with Dr. Jackson that full correction is the object to be attained for young persons with normal visual acuity and binocular near vision, no matter how high their myopia, provided the lens selected shall not be an over-correction when brought close to the eye. I fully understand that there are many exceptions to these rules, and that each case must be studied and decided on its own merits, but other things being equal I consider it a positive misfortune that when young people first come for the correction of their myopia they are so frequently given the so-called under-correction, because once under-correction having been given, it is difficult to alter it to a full correction, and a full correction, within the limits already stated, is the best safeguard against the increase of myopia, when worn with proper regard to the hygiene of the eye and the body generally. My experience in the removal of the clear crystalline lens for the relief of high grades of myopia has been a limited one, but entirely favorable. I have always operated by discission first, followed by extraction. The really brilliant results which I witnessed in Dr. Bruns' clinic to-day have well-nigh persuaded me, however, to pursue his method of repeated discissions.

Dr. Leartus Connor, Detroit—All school children are subject to about the same conditions, and yet only a few develop myopia. Why is it? My explanation is that some unknown factor of nutrition exists in the eyeball in these particular persons by which the disastrous results develop. We should, of course, endeavor to remove these so far as we can.

Dr. Allen Greenwood, Boston—I think these cases should always be refracted under the complete mydriasis of atropin.

Dr. John E. Weeks, New York—Although the accommodation theory may not, perhaps, be logical, certain cases come before us that are difficult to explain in any other way. I have in mind a family of five, the father and four children. The father had a myopia of 10 diopters with astigmatism of about 2.50 D. in each eye, with some floating opacities in the vitreous. The oldest son had a myopia of about 5 diopters with astigmatism of 1.50; the child next in age had a myopia of about 2 diopters with some astigmatism; the third, hyperopic astigmatism of 1.50 to 2 diopters, and the fourth, hypermetropia with astigmatism. In each case there was progressive posterior staphyloma. The error of refraction was corrected as completely as possible. This was about seven years ago. The father died about three years after the examination was made and his myopia had not increased. The children have been under observation ever since, and with the exception of about .50 diopter in the oldest boy the refraction has not changed. This is not an isolated instance in my practice. I have not infrequently found that the correction of the error of refraction arrested the process in cases in which staphyloma posterior or sclerochoroiditis posterior was progressive. Although convergence may be chiefly instrumental I do not believe it is the whole cause. As to the removal of the lens in high myopia, I have operated a number of times; I shall hereafter operate by small discissions at first. I shall do a linear extraction only in those cases in which I am compelled to do it. It is, as Dr. Bruns has said, a great calamity to lose an eye after advising removal of the clear lens. Operation by discission and subsequent linear extraction is safer than primary extraction.

Dr. N. M. Black, Milwaukee—I thoroughly agree with Dr. Bruns in doing small repeated discissions and not attempting linear extraction unless indicated; one exception, however, can be made, in the case where the lens is becoming cataractous; in that case linear extraction is justifiable. As to operating where there is disease of the fundus I think the patient should first undergo a certain amount of treatment.

Dr. J. H. Claiborne, Jr., New York—Dr. Thompson taught the full correction of myopia some twenty years ago. I was not aware of that until Dr. Bruns called my attention to it in

a note just now. I thought Forster was the first. As to Dr. Connor's question: I made mention of a case in these words "a relaxed condition of the tissues peculiar to some people." The negro has a characteristic expression for conditions of this kind, "slack twisted people." Such are persons of low vitality who are placed in unfavorable conditions. Some one has suggested that there should be full correction always under atropin. It is clear to me that if you take the refraction under atropin and then without you find a considerable difference. The eye will be more myopic when the atropin has worn off because there is a tonic action of the ciliary muscle that we can not get rid of. I can not accept that proposition as an absolute truism. I have observed a habit growing among ophthalmologists in speaking of "refracting patients," and I want to put myself on record as opposed to it. A patient may be refractory, but can not be refracted. We should eliminate that expression from our nomenclature.

RESEARCH PROBLEMS OF PHARMACOLOGY.*

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The main object of pharmacology is to supply a basis for rational therapeutics. The entire medical profession has always been in accord as to the desirability of this end, but the methods of pharmacology did not at first secure universal recognition. This prejudice against laboratory experiments has now practically disappeared, partly through the advance of medical education and partly through mutual concessions. The modern physician realizes that rational therapeutics can not be based solely on bedside "experience," with its hastily and imperfectly observed and digested data. The phenomena in question are altogether too complex to be understood by such primitive methods. They need to be studied by the most delicate and profound methods over which modern science disposes. This study constitutes a large part of the research problems of pharmacology.

PRACTICAL PROBLEMS.

These problems, which pharmacology must investigate in regard to every used drug, before rational therapeutics can rest on a sound foundation, are broadly as follows: The immediate and late, the direct and indirect, modifications produced by varying doses of the drug in every structure on which it may act, intentionally or accidentally; these actions as manifested in disease; the cause of these actions; the fate of the drug in the body; the chemical constitution of the drug; the effect of the constitution on the action; the possibility of modifying the constitution of active drugs and with this their action, with consequent improvements in the drug; and, finally, the effect of the simultaneous presence in the body of this drug with others.

Almost every pharmacologic research deals more or less directly with one or another of these questions, and considerable has been accomplished in this direction. The results are, however, altogether too scanty. To realize how far we still are from a satisfactory solution of these problems, you need only examine critically our present knowledge of even the most commonly used drugs, such as strychnin, and you will see that not one of the above questions is answered as fully even as our present experimental means permit. It is well to recall that we do not even know wherein the members of a pharmacologic group—such as the digitalis group, the bitters, the cathartics—differ from each other. As a further instance of our limited knowledge of very important points, it must be confessed that we know very little of the late changes produced by drugs and of the reactions which must in many cases follow their actions.

PROBLEMS REQUIRING CO-OPERATION WITH OTHER MEDICAL BRANCHES.

To obtain satisfactory solutions of these problems, pharmacology must undertake, in the first place, a more detailed study of the therapeutic and poisonous actions of important remedies, such as aconite, alcohol, antipyretics, antiseptics, arsenic, caffein, cathartics, cholagogues, dietaries, digestive ferments, digitalis, diuretics, ergot, gelatin (as hemostatic), hydrastis, iodids, iron, mercury, quinin, strychnin, saline infusions, etc. These should be investigated not only by laboratory experiments, but also on carefully diagnosed and observed cases at the bedside. For this a correct diagnosis and understanding of the pathologic condition are prerequisite, and the slow progress of therapeutics is partly due to the deficiencies in this respect, deficiencies which the leaders in these branches are the first to acknowledge. However, it should be possible, even with the present conditions, to so state the problems to be investigated that the answers should be clear and decisive, and that the results of different observers would be comparable.

It is in this connection, in directing and co-ordinating clinical inquiries, that the older, experienced practitioners could do invaluable service in advancing pharmacologic research. Very great benefits are to be expected from the reorganizing hospitals for this purpose, for there are at present very few hospitals in which the experimentalist can co-operate with the clinician. As an instance, there are very few which have the laboratory facilities to make the most ordinary observations on metabolism; nor have they on their staff any men practiced in such work, or even nurses or orderlies who are trained in collecting the material properly. The limits of the thermometer, microscope, hemoglobinometer, hemocytometer and thermostat; and of test tube and burette work, have been pretty well exhausted. To make real advance, the hospitals must have added facilities, and must have a man or a staff who can devote themselves to the scientific work, without distraction by routine duties lying outside of the scientific scope.

This would also give opportunity for applying pharmacology to the investigation of the nature of disease. It must be remembered that both in pharmacology and in pathology we deal with altered cell metabolism. It is often merely a matter of convenience under which science we class a given phenomenon. Toxin-tetanus, diphtheritic paralysis, diabetic coma, and many other forms of disease are strictly intoxications. The methods used in their investigations must be essentially those which have proved so fruitful in the pharmacologic laboratories. All the diseases due to toxins, as also uremia, scurvy, rickets, gout, nephritis, indigestion, etc., need to be investigated in this spirit. This fact is not yet sufficiently appreciated. Natural and acquired tolerance to poisons is another subject in which the pathologist, clinician and pharmacologist can co-operate; but in this field pharmacology is particularly behind. We know less about the mechanism of tolerance in the case of drugs, as morphin, nicotin, alcohol or atropin, than in the case of bacterial toxins—although even here our knowledge is not exhaustive.

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Materia Medica, Pharmacy and Therapeutics, and approved for publication by the Executive Committee: Drs. S. Solis-Cohen, George F. Butler and N. S. Davis, Jr.

Considerable progress has been made in the way of replacing crude drugs by their active constituents. However, we know but very imperfectly the active constituents of some very important drugs, as digitalis or ergot. Methods should be devised for the practical isolation of these in active and stable form. Other plants, not as yet in common use, may also contain valuable ingredients. The usefulness of active constituents in general could often be greatly increased by modifying undesirable characters, as instability, solubility, rapidity of action, side actions, etc. There can be no doubt that the actions of a drug depend on its constitution, and can be altered with this. Here the chemists do us a great service by modifying the constitution of drugs in almost any manner which we may desire. It is the office of the pharmacologist and of the clinician to ascertain the effect of these modifications. This has been done in many cases to the great advantage of therapeutics. The small book of Fraenkel, *"Arzneimittelsynthese,"* gives very interesting proofs of this statement. It does not seem too much to hope that we may eventually be able to dispense entirely with vegetable drugs, and to produce artificially the identical constituents which we now use, and in many cases improvements on these.

This era seems, however, still very distant; we must for some time put up with the disadvantages incident to drugs derived directly from the organic kingdom. But here also great improvements are to be effected, and this offers an alluring field for the scientifically trained pharmaceutic chemist. The present pharmaceutic preparations are, in many cases, far from ideal. They often contain useless and even undesirable constituents, are unsightly, of bad odor and taste, inconvenient and prone to alteration. One of their most unsatisfactory features consists in their uncertain strength. This should be speedily remedied by suitable assay processes, chemical or "physiologic." The subject of physiologic standardization needs thorough investigation to determine the limits of its usefulness, and to establish proper official standards. When reliable assay processes have been elaborated, a great deal can be done in improving crude drugs by cultivation, selecting proper varieties, determining the best season for collecting, etc.—as is now done in the case of cinchona and of the sugar beet. Cultivation should produce a more steady supply of a higher and more uniform quality.

METHODS.

There is no dearth of problems which may be solved by the experimental methods now known to us. However, investigation directed to the improvement of old, or the elaboration of new, research methods constitutes a very useful field of research. Every advance in this direction brings with it large additions to our knowledge, by opening up new problems, or by making research more exact, more easy or less costly.

THEORETICAL QUESTIONS.

I have attempted to lay before you some problems, the solution of which would have an immediate bearing on the questions of everyday practice. Every successful research, in answering some questions, raises others. Every explanation requires further explanation, until we face the question: what is the ultimate nature of the phenomena of life? This, the ultimate question of all biologic sciences, needs to be answered before biologic problems can be said to be thoroughly understood. But just as the science of physics is not rendered useless by the fact that it can not explain the nature of matter or of force, so the science of medicine is not rendered useless because it has not yet answered its ultimate problems. We can not afford to lay medicine aside until the biologist has finished his investigations. While we are seeking to solve the puzzle of the "ultimate question" we must be content with finding partial solutions to practical questions as they present themselves.

Both lines of investigation are open, and research may be directed either to immediate practical problems, or it may deal more or less directly with the ultimate questions. However, the two are so closely interrelated that every result in one direction aids also in the other. It is, therefore, quite possible to keep both objects in view. This will broaden the work, and will make it more immediately useful. The history of science shows abundantly that achievements in abstract directions are by no means incompatible with the duties of a practicing physician, much less with those of a medical research worker. Pharmacology has taken a prominent part in the investigation of the ultimate vital phenomena, and it holds out peculiar promise in this direction. Its object and scope go to the very root of the matter. It is the experimental chemistry of protoplasm. As ordinary chemistry studies the properties of elements or of simpler molecules by combining them with reagents, so pharmacology studies the properties of the more complex protoplasm (or biogen) molecules by combining them with similar reagents—in other words, by acting on them with chemical or molecular stimuli. The rich variety of stimuli which pharmacology supplies offers a good chance of solving the riddle of the chemical changes which underly stimulation. This requires, however, a more philosophic comprehension of pharmacology than we have at present. Our science consists as yet for the most part of isolated facts without apparent connection. These must be reduced to general laws. We know, in a general way, that drugs act selectively on certain cells. An intimate connection must exist between the constitution of drugs acting on similar protoplasmic structures, and also between the constitution of structures which are affected by a given drug. These connections are becoming dimly perceptible, but require much detail work in the elaboration of a cellular and comparative pharmacology. The modification produced by reagents must be studied by every conceivable method on vital phenomena in their simplest and in their most specialized forms. They are to be studied in their simplest variety, as exhibited in unicellular structures, as the protozoa; and also in collections of cells—in tissues—where the effects are summed up, and consequently larger, but also more complex. They are to be studied in functions of the most primitive type, as in ameba and bacteria, where the functions are simplest in kind, but are complicated by other functions; and they are to be studied in the most specialized form, as in muscle or nerve, where the functions are single in number, but complex in the development which they have reached. We must also study the corresponding modifications in the constituents of protoplasm, particularly in proteids, in organic and inorganic ferments, in toxins, antitoxins, agglutinins, etc.

As these data become known, it will be possible to connect them, and to arrange them into larger and larger groups. We will then have to inquire into the underlying cause of these groups; in other words, into the principles which determine drug action. It is very probable that the grouping will itself throw light on this question. The selective action of drugs may be in part

explained by selective absorption, in part by chemical affinities of the protoplasm. The explanation of both may be largely the same. In either case there is a co-operation of ordinary physical forces, and of other forces which have not so far been reduced to physical terms, and which are, therefore, called vital. The relations of these two sets of forces are interesting problems which find practical application, e. g., in the phenomena of absorption and secretion. We can not hope to make much advance in the study of these vital forces until the part played by the physical forces is understood. When this has been done, the remaining questions will be clearly and simply stated. It may also be expected that the inquiries necessary for this purpose will throw light on the remaining questions, or will at least point out the way for further inquiry.

These are, in broadest outline, the problems which pharmacology has to solve in the matter. It is needless to say that these ultimate problems may and must be also approached by other channels. The chemist must clear up the constitution of proteids, and eventually of living protoplasm; the morphologist must explain structure, the pathologist the phenomena of degeneration and of death, the physiologist must co-ordinate all these data, etc. Indeed, these problems are the meeting place of all the biologic sciences. To insure any conspicuous success in their solution, the investigator must possess a good measure and quality of "scientific imagination" and an extensive acquaintance with the advanced work in the several departments of natural science; he must have a comprehensive, carefully-matured plan of investigation, in which every achievement of research finds a natural place. Very few can have these qualifications. Nevertheless no investigator can be indifferent to these ultimate problems. Every well-ascertained biologic fact, no matter how isolated or insignificant, will contribute to their solution, for these facts constitute the raw material from which generalizations and laws must be built.

PHARMACOLOGIC RESEARCH FOR THE PROFESSION.

My object in laying before you this outlined program of pharmacologic research has been to show you that pharmacology has very many practical and theoretical problems which are capable of solution, and which are worth solving. A physician who wishes earnestly to co-operate to some extent in this research work, will naturally meet some difficulties, and must be prepared to make some sacrifices. But these will not usually be insuperable. There are problems, on some of which I have touched, which demand little except clinical material and accurate—and especially unprejudiced—observation. Here belongs a great deal of preliminary work in comparing the value of drugs supposed to possess equivalent actions, as also observation of idiosyncrasies, of unusual effects of drugs, etc. I may say here that I consider isolated observations of this kind as usually possessing comparatively small value. They acquire importance only when they are collected and examined critically, collated and generalized. I would suggest that the Chairman of the Section appoint expert committees consisting of clinicians and experimentalists to whom such observations could be communicated and who could report yearly on progress. I have already indicated the rôle which hospitals should have in this work. Sooner or later, the intending investigator will recognize the limitations of such empirical observations, and will desire to apply experimental methods. This requires special training, and usually laboratory facilities. Experimental work is, therefore, best begun in an established pharmacologic laboratory, under the guidance of a skilled teacher. This will offer no great difficulty to those physicians who practice in a medical center. One or two hours every day devoted conscientiously to this purpose will suffice for a great deal of research. For those who live at a distance the difficulties are greater, but can be surmounted by spending a few weeks every year in the city. The sacrifice in doing this is perhaps rather apparent than real. In countries in which the public is educated to realize the value of medical research, work of this kind usually redounds in the end to the advantage of the practice of the investigator. I have not sufficient personal experience to say what would be its effect in this direction in this country. But even if we assume that it does somewhat cut down the income, every physician should ask himself whether it is not worth some cost. On undertaking this work the beginner must take care to make haste slowly. A most frequent cause of failure and disappointment is the choice of problems which are too large or too intricate. If the intending investigator has not had any laboratory training, he will do well to either take a laboratory course, if such can be obtained, or to give what aid he can to a more advanced worker, and to pick up some training in this manner. He may then attack some short and simple problem, intended mainly to familiarize him with research methods. The choice of this he should leave to his instructor. He will thus acquire the experience which will enable him to begin on more independent work, preferably along lines suggested by himself; but he should be slow to dispense with the advice and supervision of some more experienced investigator.

The students of the present generation have considerable advantage over the older practitioners, for some amount of laboratory technic is now taught in all the better medical schools. However, the colleges could do a great deal more in this direction of university work by developing the scientific spirit in their students: through the contagious example of research on the part of the instructors; by offering more extensive and more advanced laboratory courses, and by encouraging original work on the part of students. The luxury of laboring at research can not and should not be forced on every student; but the present medical curriculum is so overburdened that even the most willing student can not find time for advanced university work, and is hard put to it to acquire what is strictly necessary to his calling. The only relief seems to be in some system which cuts down the minimum in all branches, but requires advanced elective work along some lines. Such a system is quite simple and feasible in theory; but in practice it is a most expensive method of teaching, since it necessitates a large staff and costly equipment. However, increase of the cost of teaching is a common condition in all progress of medical education. The endowment of medical colleges is one of the most pressing needs of the day, if they are to keep the pace which they have set.

The efficiency of research work could be very greatly increased by more extensive co-operation and organization. Many questions remain unsolved, many good ideas are lost, many good researches come to naught, for the lack of these. The most important and far-reaching problems are too large to be solved by one man, and must be abandoned or only very partially answered,

unless co-operation of investigators exists. In this sense it would be very desirable if there were some central institute or academy which would direct the activity of all the research workers in a given field; which would assign problems and apportion means; which would direct and co-ordinate the work. The difficulties connected with such a plan are, however, so great that there is little chance of its realization in the near future. Nor is the present system, in which every laboratory is an isolated center of research, without some compensating features. It serves to distribute research over a wide field; it encourages originality, and it is a strong stimulus to competition, which is not always detrimental. These features are not, however, incompatible with some degree of co-operation. Every research worker should place himself in communication with other experimenters, or under their guidance. No better means for this purpose can be imagined than the scientific medical societies, local and national, and their sections. These can, by the appointment of committees, by prescribing of questions and by popular lectures, etc., take on themselves advisory and critical functions which would be extremely valuable, and which would lie strictly within their scope.

This concludes all I wished to say to you on the subject of "Research Problems of Pharmacology." I hoped to convince you that work in this field deserves the active support of the entire medical profession, and that this support is practicable. I have tried to give some suggestions as to the ways in which the best results could be assured. I have also ventured to give my conception of the rôles which the professional pharmacologists and the clinicians, the laboratories, the hospitals, the medical and scientific societies should play in this work. These are deep questions, and the views of others will doubtless be of the greatest value, if the paper is so fortunate as to elicit discussion. The solution to this most direct problem—how much every one of us should contribute to this work—is one which each must necessarily answer for himself.

DISCUSSION

ON THE PAPERS OF DRS. CUSHNY, TYRODE, AND SOLLMANN.*

DR. CASWELL A. MAYO, New York—I am much pleased to have the opportunity to say something on behalf of the American Pharmaceutical Association. That association is working on closely similar lines to those being followed by this Section, a fact which is shown by the character of recent communications read before the American Pharmaceutical Association, one of which was the report of the committee on the acquirement of drug habits, of which committee I am a member. This committee made rather an exhaustive study of the subject by correspondence with members of the pharmaceutic calling, and the conditions found show the great need for radical legislative measures restricting the sale of narcotic drugs. I am happy to say that this need is appreciated, and has already been acted on in Ohio and Illinois. One wholesale druggist in Ohio recently informed me that since the enactment of the anti-cocain law in that state—and the American Pharmaceutical Association is primarily responsible for the passage of the law—his sales of cocain had diminished to one-fourth of what they had been. We know that the sale of cocain in Ohio had grown to enormous proportions, but these sales have been materially cut down, and this is due largely to the activity of the American Pharmaceutical Association and the Ohio Board of Pharmacy. I mention this to show that the pharmacist, though much maligned, still has the good of the public at heart, and fully realizes the obligations under which he rests. No doubt you have seen much in the papers about the amount of adulteration of drugs that is carried on in New York City. Unfortunately, much of this is true, but the manner in which the facts were presented would convey the idea that all pharmacists are guilty of adulteration. All of you know that this is not true and that some of the pharmacists are reliable, and I want to enter a plea with you for the honest pharmacists. Last year the American Pharmaceutical Association celebrated its fiftieth anniversary; this organization was founded for the prevention of adulteration of drugs. This fact shows that the better element in the drug trade is active in its efforts to prevent adulteration, and the physician can help the reputable pharmacist by giving countenance only to those pharmacists who are accurate and trustworthy.

DR. HENRY BEATES, JR., Philadelphia—It is interesting to contemplate what seems to be the natural disappearance of homeopathy. In an effort to establish a law governing practice in the state of Pennsylvania, where there are three boards of medical examiners, a measure was incorporated in the proposed act which would restrict the licentiate to that system of practice representing the school from which he obtained his diploma. In other words, one licensed by the eclectic board would be restricted to eclectic practice, and so, respectively, with the licentiates of the homeopathic and the regular boards. It is interesting to know that a delegation representing homeopathy appeared before the legislature and protested against the incorporation of such an article in the proposed act. In reference to the general results which have been published and taught as the result of investigations on the physiologic action of drugs, and which investigations were conducted by the administration of galenic preparations, it is self-evident that the natural complexity of a given remedy, because of the various active principles possessed, renders these conclusions erroneous. Our physiologic action, therefore, must be practically rewritten, and such conclusions adopted as are based on the exclusive use of chemically-pure active principles. Therapeusis of a scientific character can only be practiced by the use of chemically-pure active principles. The time has arrived when these crude and unavoidably complex galenic preparations must be almost entirely abandoned.

DR. W. J. ROBINSON, New York—I am the last person in the world to discourage pharmacologic research. I know the benefits derived from this source have been enormous, but I am not as enthusiastic as I was ten years ago. Ten years ago I was a hearty vivisectionist, and was called all sorts of names by our antis; but I must say that while the benefits are great, we are very apt to be led into error. Our Chairman, in his most excellent address, has shown us that life is neither a chemical, nor a physical, nor a purely mechanical force; but I go still further and say that purely animal life is different in many manifestations from human life. In the former, for instance, suggestion plays no part, while we know what an important rôle it plays on the condition of health or disease in human beings. To mention only two examples which the essayist has given us: He said that experimental research has shown that ether in collapse is not to be used. Clinically, we know that it is a good measure when injected hypodermically. Again, pharmacologic research shows that antiseptics are of no benefit because we can not get a sufficient quantity in the blood to kill the bacteria; still, experimentally, we know that intestinal antiseptics do an immense amount of good. How they do it we do not know, but they do it. I am not opposed to pharmacologic research, but I accept laboratory conclusions with hesitation. In this connection I will read a few words written by Sir William Mitchell Banks, who was at one time an enthusiastic animal experimenter, but whose ideas on the subject have undergone a considerable change. He says:

> No one for a moment will consider me as holding in contempt either experiments or commissions as such, and what I say I say with regret, but my firm conviction is that neither of them has hitherto been of the least avail in aiding us in our search for the best anesthetic or for the best method of using it. There is no possible comparison between a healthy dog or cat or any other animal, and a diseased human being. They are not in the least under the same conditions, and experiments on them are therefore useless. Take on one side a healthy retriever with its heart and arteries all sound, and without knowledge of what is going to happen to it, consequently without the least fear or anxiety. Take, on the other

* The papers of Drs. Cushny and Tyrode appeared last week.

hand, a middle-aged, or somewhat corpulent woman, with flabby heart and somewhat inelastic arteries. Suppose her to be the victim of some cancerous disease the knowledge of which has worn her out with anxiety and distress, and then let her pass a sleepless night before the operation, going over and over in imagination all the terrible process and making sure that she will die under the anesthetic. Or take your drunken, whisky-sodden dock-laborer, with tissues so steeped in drink that one is almost tempted to believe in the possibility of spontaneous combustion, with cirrhotic liver, fatty heart and albuminous urine. I can not see any parallel whatever between the healthy canine animal and the diseased human animal, nor can I see how experiment on the former will help us with the case of the latter. It is impossible.

Dr. Bodine recently reported two cases of chloroform anesthesia, both patients dying before a drop of chloroform had been administered; simply dying from fear or autosuggestion. The conditions in experimented animals and diseased human beings are widely different. Laboratory research should be continued, but we should accept conclusions with the greatest caution, and whenever bedside experience contradicts the laboratory researches we should follow the former, leaving the latter to take care of itself.

DR. W. W. TOMPKINS, Charleston, W. Va.—I would like to see emphasized that part of the address of Dr. Tyrode which speaks of preparations which should not be excluded merely because the kidneys were not doing their duty. There seems to be an impression among the profession that in Bright's disease particularly morphin should be excluded. My personal observation and experience is that morphin will give a certain degree of comfort. So in pneumonia we are told not to use morphin on account of the depressing effects on the heart. I think that all depends on the quantity that is used. Ordinarily, large quantities of morphin, particularly in pneumonia, are injurious; but, on the other hand, one of the most satisfactory means of whipping up a lagging heart is to use morphin in small quantities, such as a sixteenth to an eighth of a grain frequently repeated. Rheumatism is one of the most unsatisfactory diseases we have to deal with. How much effect the salicylates have on rheumatism I am unable to state; in some cases they seem to act like magic, and in other cases they are most disappointing.

DR. M. VEJUX-TYRODE—I agree with the one who said that conclusions should be drawn very carefully from scientific experiments, not only on this subject, but also in scientific experiments on all subjects. As regards the use of ether, its apparent action can be explained. In the first place, all irritating substances have a reflex stimulating action due to the irritation; thus the local application of ammonia, or acetic acid, or cold baths, momentarily increase circulation; but for a longer period of time it is impossible for them to act. Ether depresses the heart only when given in large quantities. There is never greater efficiency of the heart's action, but the vessels relaxed by ether enable you to feel a pulse more plainly, and you have an apparent stimulation which, however, is not real. In regard to experiments on animals and the value of these experiments, I think the criticism is a little too severe. You will find a certain reaction in animals from certain drugs. Of course, we must admit that this varies, but, as a rule, it is only a matter of degree; and, practically, that which stimulates the muscle of the heart does so not only in the dog but in all animals down to the frog. You may say that morphin produces sleep in the higher animal and excitement in the frog. This is explained very easily. There is a certain action of drugs whereby they act strongest on the best-developed functions. In the human being the brain is more highly developed than the spinal cord, therefore morphin brings about sleep, and the stimulating action on the cord is much less manifest because in the higher animal the brain controls the cord more powerfully. On the other hand, in the lower animal the action of morphin is more pronounced on the cord because there is little cerebrum to be acted on, and thus we get excitement instead of sleep. Still, the action of the drug is not changed; it is only a different manifestation in the different animals due to their degree of development. In drawing conclusions for use in disease we must take into consideration all these different actions on different organs. Dr. Robinson stated that when we have two sources of knowledge for the action of a drug, the purely clinical and the pharmacologic point of view, we ought to choose the clinical one. I think that is a point which should be taken into profound consideration before drawing any conclusion, for clinicians have differed widely for ages and ages. A drug will be discarded for a long time and then brought into use again, but for an entirely different affection from that in which it was formerly used, and this shows that the clinical basis for action was not substantial. When sufficient experimentation has been done by reliable men, who all agree on the action of a drug, there should be no hesitancy in leaving the clinical basis and changing to the pharmacologic one.

REMOVAL OF THE FAUCIAL TONSIL;

SOME OBSERVATIONS AND A NEW METHOD OF OPERATION.*

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In reviewing the literature[1] on diseases of the tonsils, it will be found that as early as 10 A. D. the medical men of that age recognized this structure as the seat of disease, for at that time the gland was operated on and completely extirpated. In the work of Celsus (10 A. D.) we find tonsillotomy spoken of as a common practice. It was accomplished either by dissecting with a bistoury or by the fingernail of the operator. Not until much later did the profession become aware of the dangers of the operation, which finally came to be considered dangerous from the fact that cases occurred in which death from hemorrhage followed. It was in the fifth century that medical writers first advocated a modified operation for the relief of enlarged glands in this region. Ætius (490 A. D.) advised the removal of only that part of the gland which protruded beyond the pillars of the fauces. In 750 Paulus Ægineta advised grasping the gland with a tenaculum, drawing it well out of its position and "cutting it out by the root." He limited his operable cases, however, to those in which the tonsils were white and contracted, with a narrow base. He advised against operation on the inflamed tonsil. Albercasis (1120) had the same ideas, showing that the fear of hemorrhage had gained a firm foothold in the minds of medical men of his day.

After this period the operation became obsolete, and in the work of Paré (1509) mention is made of the performance of tracheotomy where there was serious enlargement of the tonsils. He also mentions ligature of the glands, but advised against excision. In 1540 it was suggested to loosen the gland around its edges and then tear it out by grasping it with a vulsellum forceps. As the operation was not easy, and dangerous, great care was enjoined. In 1637, Serverini, during an epidemic of tonsillitis at Naples, removed large portions of the gland, using caustics when they were sessile, a hook and a semi-circular knife when pediculated. In 1672 Dionis advised against operation in any form, as in his opinion the tonsil had a physiologic importance which should not be sacrificed. He did not believe in taking even a small piece away. Many surgeons wrote adversely to the operation. Among these was Heister (1683), who said: "The operation is not only too severe and cruel, but also too difficult in its performance to come into the practice of moderns because of the obscure situation of the tonsils."

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Laryngology and Otology, and approved for publication by the Executive Committee: Drs. George L. Richards, O. Joachim and G. V. Woollen.

1. The historic part of this paper was taken from Mackenzie's "Diseases of the Throat and Nose," and the anatomic part from Watson Williams' "Diseases of the Upper Respiratory Tract."

After 1740 the operation with tenaculum and bistoury was again commonly practiced. It was brought again into practice by Meseati and Wiseman. Wiseman first ligated the gland and then cut away the projecting portion. In 1757 Caqué commenced excision again at the Hotel Dieu of Rheims, and proved that the great dread of hemorrhage was unfounded. From this time on the operation became one of the recognized treatments, and instruments began to be improved on and new methods adopted for its performance. The first one to use scissors was Louis, in 1774. He used both straight and curved blades, and at times still resorted to a probe-pointed bistoury. He never cut away more than the inner half of the gland, or that part that projected into the pharynx. In 1827 Physick of Philadelphia caused to be produced the first tonsillotome, which was modeled much after the style of the present Mackenzie. Five years later the first Fahnestock came into use in Germany and France, and was the first ring knife cutting from behind forward. It was practically the Mathieu of to-day. Hundreds of styles are in vogue to-day, till the surgeon has enough to satisfy almost any fancy.

From this early history to the present time we see there have been all sorts of opinions as to the proper method of treatment of this condition, and even to-day there are those who believe the gland should be left discreetly alone.

Historically, we are not much farther advanced than was Celsus at the commencement of the Christian era, and most of us believe, as did he, that diseased glands should be completely extirpated. Surgeons are becoming more impressed with the thought that when necessity demands surgical interference with this gland it should be removed in its entirety. This conclusion has been arrived at after observations made on tonsils which have been partially removed by the tonsillotome. I have observed that, aside from the mechanical obstruction produced, the inner half of the gland is not so detrimental to the health of the patient as the part left *in situ* by the tonsillotome.

In order to bring this subject to your notice in the proper light, it should be stated that tonsils which are diseased may be divided into two classes. First, those which, by their enlarged size, produce mechanical obstruction, thus causing imperfect access both to the stomach for food and to the lungs for air, termed obstructive. And, second, those which do not protrude into the pharynx, or small tonsils, which are diseased and produce injurious effects on the surrounding tissues, or where there occur crypts which constantly fill with secretion, causing foci of infection, called non-obstructive.

In the first instance, a mere reduction of the size of the gland might suffice, whether this be accomplished by excision or the shrinking of the gland. This condition may be relieved by the use of the tonsillotome, and, in the opinion of the writer, is about the only place where the use of this instrument is permissible. With this instrument we are able to remove about two-fifths or one-half of that part of the gland which projects into the pharynx, giving as much room as would be indicated by the inner edge of the palatal arches, it being impossible to get much beyond this. Splitting the tonsil, puncturing it with acids, the use of the galvano-cautery point, or the use of gargles or pigments are of little or no benefit, but all have their devotees, and many think they obtain satisfactory results by the use of such methods. For this we care little at the present time, it being our object to deal with those cases which come under the second class, namely, those tonsils which it is impossible to remove with the tonsillotome, even in part, which constantly fill with secretion in the diseased crypts, and form foci of infection. To this class belong nearly all of the cases brought to the notice of the surgeon. The patient has a history of attacks of tonsillitis, perhaps peritonsillar abscess or "quinsy," and in same cases beginning phthisis. It has been demonstrated beyond question that this gland, when diseased, is a means of infection; it is now classed along with the other infective tracts, the intestinal, respiratory and genito-urinary. It is not hard to believe that these lymphatics are active in the production of disease, if you but observe the great quantities of putrid material squeezed out of a tonsil in the process of extirpation, as it is a decomposing mass, and its retention in the tonsil and surrounding parts permits of its absorption by the system. The part of the gland most productive of this process is found in the supratonsillar fossa. Just at this point let me call your attention to the formation of this gland with its anatomic relations. With the appearance of the horizontal fissures in the lateral foregut there appear the formation of five arches with intervening clefts. From the first arch or plate the lower jaw develops. From the second arch the anterior pillar of the fauces and a portion of the hyoid bone. From the third arch the posterior pillar of the fauces, and the cleft between the second and third forms the fossa of Rosenmueller above and the sinus tonsillaris below. The palate is formed by the ingrowth of the palatal plates from the upper jaw which meet in the median line. These plates extend backward and cross the second and third visceral arches and the intervening cleft, dividing the fetal pharynx into an upper and a lower series of parts.

In the upper part the eustachian tube is developed from the cleft between the first and second arches. Behind it is Rosenmüller's fossa, corresponding to the cleft below the soft palate, which is known as the sinus tonsillaris, in which the tonsil develops, the unoccupied portion of the cleft above the tonsil being the supratonsillar fossa. The faucial tonsil arises by an invagination of the hypoblast in the sinus tonsillaris. The diverticulum thus formed subdivides, forming the crypts around which lymphoid tissue develops. Some authors state that there are often two tonsils formed, but this can easily be understood as being only one tonsil when we reflect that in the formation of the tonsil irregular folding of this diverticulum may occur with the subsequent development, or not, of lymphoid tissue in any particular part. It is thus that the different forms of tonsils occur, and although there may apparently be more than one tonsil, it is one structure which may be subdivided irregularly.

In early fetal life the anterior pillar widens and extends backward, covering the cleft in which the tonsil develops. In this way the tonsil may be more or less completely covered by the thin free border of the anterior pillar, which membrane is known as the plica triangularis or tonsillaris, mentioned further on in this paper. The supratonsillar fossa may extend downward on the outer side of the tonsil between it and the superior constrictor muscle of the pharynx, and also upward and backward into the soft palate. This condition can also be produced by pathologic causes. The supratonsillar fossa appears to be the most important part of the anatomy of these parts from the fact that the uppermost crypts of the tonsils empty into it and because the orifice of com-

munication with the pharynx is often imperfect, owing to the presence of the plica tonsillaris or a hypertrophied condition of the upper part of the tonsil.

The pocket thus formed by the extension of the supratonsillar fossa becomes the receptacle for micro-organisms and the accumulation of decomposing caseous material extruded from the upper tonsillar crypts. The plica tonsillaris is at times very marked, and we can recall cases where a tonsil was almost hidden from view by this membranous fold. A case comes to mind where only a small portion of the superior part of the tonsil was in view through a small round opening six mm. in diameter in the plica tonsillaris. Conditions similar to this are not uncommon. This will easily be understood to close the opening between the supratonsillar fossa and the pharynx and we can readily understand how accumulations in this fossa may be kept penned up, as it were, in a sac. In nearly all these cases we can pass a probe up over the gland into a pocket which varies in size and depth, and at times passes down and around the external surface of the gland. The crypts which empty into this fossa are often pressed on, and if there be a slight amount of inflammation of the pillars, the cavity may be closed off, giving rise to a condition where it is difficult for the secretions to escape into the pharynx. When this exists the imprisoned secretion undergoes decomposition, and an auto-infection occurs. The secretion thus accumulating begins to burrow and gives rise to a condition where the tonsil becomes surrounded with cheesy material, as was described by Pynchon in his article on the "submerged tonsil." I have never seen a case where an operation for removal had been done with the use of the tonsillotome that this top of the tonsil could not be demonstrated. The crypts that empty into the throat are not so apt to fill or stay filled with this secretion as they are squeezed by the pressure made on the tonsil in the act of swallowing by the pharyngeal muscles. For this same reason there is a tendency to form larger pockets behind the tonsil by pressing the secretion toward the point of least resistance. Thus it is common to find cavities extending up into the soft palate and down behind the gland as far as the larynx.

After the formation of such a pocket, even though the supratonsillar fossa becomes communicative with the pharynx again, it is found that there is a habit of secretion becoming lodged here, giving rise to symptoms such as localized tonsillitis, peritonsillar abscess or rheumatism. Owing to the above fact, I have been in the habit of teaching students that if any part of the gland must be left in the throat let it not be the upper portion. In other words, clean out the supratonsillar fossa at all events, for the lower part is of vastly less importance, although we should take that portion also. It makes no difference how small the gland is if it be diseased, for if this perverted secretion is present it should be removed. This secretion has never been studied enough to determine its consistence, but I am wont to believe it is of a cholesteomatous nature.

I have been astonished in finding so many specialists who still adhere to the belief that a diseased tonsil does no harm. I can not understand why it does no harm if we can demonstrate the material it continues to manufacture contains decomposing and septic material and we are able to demonstrate the presence in this secretion of virulent bacilli. I do not wish to be understood as advocating the removal of all tonsils, but that these diseased ones should receive the strictest kind of surgical treatment. It is almost impossible to contend with cases of pharyngitis, tonsillitis, laryngitis and non-suppurative otitis media, unless we get rid of such diseased conditions. This is particularly true of the last-named disease. From the foregoing it is attempted to show that it is not the size of the glands that interests us most, but its character. Thus we may have very large hypertrophies causing little or no trouble, whereas, on the other hand, very small insignificant ones are productive of the direst results.

With these facts in mind it devolves on us to find the best means for the removal of this diseased tissue and the destruction of the pockets already formed. It matters little just how the tonsil is removed, and probably each one of you have a method which is efficacious. Personally, I was in no way satisfied with the means at hand, and have endeavored to perfect an operation at once easy of mode and complete in result. Before describing my own method, however, I should like to state some of the objections I have observed to the means commonly in use:

1. *The Tonsillotome.*—This is figured in the great majority of text-books as *the* way. It seems to me it should no longer be classed as an instrument for complete removal of tonsils, as this is an impossible feat with its use. The only place where its use is permissible is in very young children where the tonsils are so large as to encroach on the process of breathing and swallowing. Even in this case it does the work in a very poor way. It is a compromise and should no longer be tolerated by specialists. The cases of dangerous hemorrhage written about are often after the use of the tonsillotome and occur from the division of a small arterial branch, which on account of its being embedded in fibrous tissue can not retract. The contents of the supratonsillar fossa can never be removed with this instrument, as has been repeatedly shown by clinical demonstrations. It is of no value in small tonsils or those which are long and flat. It, therefore, should be discarded as an instrument for tonsillotomy.

2. *The Snare.*—This method is a good one, but is too slow. The entire gland must be loosened from its attachments above, below, in front and behind, before the instrument can be applied. The hemorrhage may not be so great as by the cutting methods, but cases have come to my knowledge where very severe bleeding occurred. It is a good method where the use of general anesthesia is indicated and especially in children under narcosis.

3. *The Galvano-Cautery.*—Several methods of this type of operative procedure are in use. The method as practiced by Pynchon gives fine results save that it leaves a large cicatricial space on each side of the pharynx. The main objection to this method is the loss of one-half of the anterior pillar and the long period of suffering after each cauterization, and the danger following of middle ear inflammation. As done by its author, one-half of the tonsil is burned out. After this is healed the remaining half is burned away. Then the other tonsil is attacked in a similar way. Each burning leaves the patient with a sore throat for ten days. In this way he must be laid up for forty days for the complete operation, which is an objectionable point, and few patients willingly submit to it. It is not practical at all in children, as each burning occupies from fifteen to twenty-five minutes, and children will not stand this length of performance. Strong solutions of cocain are used, and many people are easily poisoned with this drug.

4. *Dissection.*—This is a tedious operation, requires a good patient and is liable to leave a haggled surface. It is hard to avoid cutting the pillars, and when the tonsil extends well up into the soft palate, as it often does for 2 cm., it becomes difficult. Bleeding is very troublesome, and this makes a clean, smooth wound very hard to accomplish. Hemorrhage is very liable to be severe.

5. *Scissors.*—After trying all the other methods, I have come more and more to depend on the scissors method, and the more I see of them the more confirmed do I become that this method is the best for dealing with hypertrophied and diseased tonsils. After loosening the anterior pillar with a curved bistoury, the scissors are fitted into place, and with two or three snips the tonsil is removed.

After its removal the supratonsillar fossa is explored for fragments, and if any are found it is easy to cut them away. Flat tonsils which extend down to the base of the tongue are as easily removed as little ones. After the tonsil is removed, if any pockets exist they can be cut out in the same manner. The scissors I prefer is one devised by myself and has the following points of advantage: (1) It has blades that can be thrown wide apart with the least possible motion of the handles; (2) as the handles do not have to be widely separated, one is able to operate in a mouth where the teeth can not be thrown wide apart; (3) the curve of the blades is sufficient to avoid the danger of cutting the epiglottis; (4) they are bent on their long axis so that when in position they fit between the pillars of the fauces; (5) they are strong enough to cut through the toughest fibrous tonsil. The instrument used to separate the pillar is a double-edged bistoury curved on the flat and with a dull point. By having it double-edged it may be used to cut up or down and for either tonsil. In its removal the tonsil is grasped by a strong fixation forceps by which the gland is drawn inward. The left tonsil is removed with the scissors held in the right hand, and the right with the scissors in the left hand. It is unnecessary to resort to the use of a mouth gag or tongue depressor. There is little pain after the pillar is loosened and the hemorrhage is not greater than with the use of the tonsillotome. The wound is clean and smooth, and is healed in from four to seven days. The pillars do not attach to each other, and after the surfaces are healed it would be hard to tell that an operation had been done, as very little cicatricial tissue is formed.

After a year's observation, both in clinical and private cases, I am satisfied that this operation is a happy solution of complete excision. In several instances in removing fibrous tonsils I have seen brisk bleeding which in each case was caused by the cutting of a small arterial branch embedded in the fibrous tissue. In these cases I grasp the bleeding vessel with the surrounding tissue and excise it till I find I am into the connective tissue surrounding the tonsil. As soon as this is accomplished the vessel has a chance to retract and the bleeding ceases. I have never had to resort to unnatural means as yet for controlling hemorrhage and have not thus far experienced secondary hemorrhage. Young patients, as well as older ones, are operated on with ease, and it seems to the author that there is nothing wanting to make the operation both generally adopted and useful.

100 State Street.

DISCUSSION.

Dr. Frank W. Hilscher, Spokane—I have been doing a similar operation for about three years, and I am in accord with everything Dr. Robertson said this morning, especially that regarding the removal of those tonsils which ordinarily are not removed. They are diseased tissue and are very frequently the cause of trouble where one would not think they would be large enough to do any danger. Those pockets harbor all kinds of germs, and unless you can get rid of them entirely you have not done for your patient all that you should. I use the scissors usually for the whole operation. I have a certain kind of scissors with which I can remove both tonsils with the right hand.

Dr. S. G. Miner, Detroit—I certainly think that the scissors operation must be performed in a very limited number of cases. The great objection to it is its severity; in private practice the pain and discomfort given the patient is unnecessary except in the diseased submerged variety. I think if more care were taken in freeing the tonsil from all adhesions better results would follow. If that were done in every case the scissors operation would be unnecessary. If we can remove the tonsils with the tonsillotome, it is certainly preferable.

Dr. J. F. Barnhill, Indianapolis—Dr. Robertson's demonstration shows that there are imbedded tonsils that can be well and certainly removed by his method. I have no doubt that if some of us who are less skilled in the use of scissors were to try the operation we would meet some difficulty. I prefer the use of the snare in such cases as Dr. Robertson operated on this morning, first loosening the pillars from the tonsils just as Dr. Robertson did before using his scissors. I think that with the snare method the operator can remove the tonsils much quicker than did the Doctor with his scissors, rapidly though he worked. For a child, I very much prefer the tonsillotome to any other instrument. At this age the gland is soft, not often adherent to the pillars of the fauces, and removal can be accomplished in a very few seconds. This being the case, why should we subject the child to an operation which is longer and more painful?

Dr. E. Fletcher Ingals, Chicago—In the majority of cases that I see, the pillars of the fauces are adherent to the tonsils, and when this is the case I am not able to remove them satisfactorily with the tonsillotome. In adults I use the tonsillotome almost invariably; in children I seldom use it. In children and in adults when the anterior pillar of the fauces is adherent to the tonsil I separate them with the blunt hook and with my finger, and then, with my finger when practicable, dissect the tonsil loose from its bed. It may then be seized with the forceps and removed with the cold snare. In this way there is practically no hemorrhage in the great majority of cases, excepting the little that comes from separating the anterior pillar. I formerly thought there would never be bleeding of any amount, for in hundreds of operations I had not seen it; but one day when operating on a child a vessel a millimeter and a half in diameter bled profusely, but as the patient was under a general anesthetic I had little difficulty in catching the vessel with a hemostat and tying it. In more than 50 per cent. of all cases of hypertrophy of the tonsils in children there is an enlargement at the same time of Luschka's tonsil. If we remove the faucial tonsils but leave a large Luschka's tonsil we have not done our duty. In about 20 per cent. of the cases of adenoids there is also atresia of the posterior nares which should be cured at the same time. Owing to these conditions I place the patient prone with the face drawn over the side of the table and first remove the right tonsil, and then turn the patient to the other side and remove the left tonsil, and with the patient in this latter position I remove Luschka's tonsil. If an operation is done at all it should be done well.

Dr. Robert C. Myles, New York—It would seem that an operation like tonsillotomy should have been more or less perfected before now, but my opinion is that it is in its infancy. For several years I have been experimenting with the tonsils. I have employed the scissors, the guillotine, the snare, and the various forms of tonsil punches, and the operations have been done with and without anesthesia. It seems to me extremely odd that we should think so differently concerning the tonsils. I have never seen a tonsil adherent to the anterior pillars. In the dead room I have taken specimens and given them to the

pathologists and they could not find adhesions. The part some physicians call the pillar is the opercular fold and is a half an inch from the pillar. This fold of mucous membrane touches the pillar only at the upper part. We should determine how much tonsil tissue one is entitled to; we do not know how many cubic millimeters of tonsil tissue should be considered the normal amount. If one examines carefully he will find that tonsil tissue in many cases extends outward into the neck for some distance. In children, on whom guillotine operations on the tonsils have been performed, I often find large masses that should be removed. In the cases in which there is bleeding and vomiting, in a woman, for instance, who is delicate and nervous, the punch forceps is at times preferable.

DR. H. W. LOEB, St. Louis—In the beginning of my practice I feared and looked for adhesions. I have not found much reason, as Dr. Myles states, to fear adhesions. My trouble is not with the adhesions to the pillars or to the plica tonsillaris but with lateral attachments. When the tonsils extend downward and are attached to the lateral wall of the pharynx you may have considerable trouble. My own methods, of course, have been various. In the more favorable cases, with the electrocautery snare you can get out all the tonsil that projects, and with the cold snare, of course, the same thing could be done. The appearance of the cut surface of the tonsil when the knife operation is used and the rounded appearance when the snare is used, in many cases demonstrates the value of the snare operation in completely removing the diseased tonsillar tissue.

DR. GEORGE L. RICHARDS, Fall River, Mass.—The ordinary Schleich anesthetic tablet dissolved in water and injected into the tonsil will secure an anesthesia that will materially help in operations without general anesthesia. It is of especial value in the snare operation. Dissolved in an adrenalin solution it gives beautiful results in preventing loss of blood. In only one case have I had hemorrhage after this method. I dissolve the tablet in thirty minims of 1 to 6,000 to 1 to 10,000 adrenalin solution.

DR. CHARLES M. ROBERTSON, Chicago—We must remember that this is an operation for the removal of the tonsils rather than an operation for the avoidance of pain. The operation is not any more painful than a tonsillotomy ordinarily is. It is not any more painful than the snare operation. It is also not so much a question whether we can get the tonsil out quickly or slowly but rather whether we get it all out. As to the danger of this operation, it seems to me to compare well with other operations. Dr. Ingals says that he never uses the tonsillotome in children but invariably does in adults, and that he never finds adhesions in adults, but does in children. The reverse would seem to me better. In the hysterical man I operated on this morning the adhesions were tough, true adhesions and difficult to cut. In Chicago I have seen many such cases. Of course, what I have called adhesions may be the plica tonsillaris, but there are adhesions there nevertheless. One can use any kind of general anesthesia preferred. The hen-egg tonsils spoken of by Dr. Myles are exactly the ones we are after, and the ones I particularly use my scissors for. The possibility of doing damage to the blood vessels has been suggested. One can go just as far as one needs to get out the tonsillar tissue and no further. After one gets out all the tonsillar tissue one can see the connective tissue. As to the snare, Dr. Loeb's remarks correspond with what I said in my paper. It is a good method, especially in children under general anesthesia. The objection is that you have to loosen up the tonsil too much to adjust the snare. The tonsil often extends up into the soft palate, and you can pull them well down within the grasp of the scissors. These cases make the most beautiful ones for the use of the scissors. The hemorrhage the Doctor spoke of was not a secondary hemorrhage. Secondary hemorrhage comes on later from the sloughing of a vessel. What he mentioned was a late primary hemorrhage. I do not object to the use of the tonsillotome, but it is an imperfect method of operating.

To properly diagnosticate a given case is the *sine qua non.*—*Pennsylvania Medical Journal.*

ARTIFICIAL DILATATION OF THE CERVIX UTERI WITH A NEW INSTRUMENT.

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Artificial dilatation of the cervix uteri during labor is a well-recognized obstetric expedient, which is not only of great value in certain cases as a means of accelerating tedious labor, but also becomes an absolutely necessary method of procedure in many instances where the life of the mother or of the child may be dependent on prompt delivery.

The problem of the safe and efficient mechanical dilatation of the rigid cervix of the pregnant uterus is an interesting one which has not as yet been entirely and satisfactorily solved, although there are many methods and a considerable number of instruments devised for the purpose. Under the head of mechanical dilatation of the cervix the writer would include all forms of artificial dilatation whether performed by the hand, by dilating bags, or by instruments.

Bougies and gauze introduced into the uterus, the latter device being known as tamponade of the cervix, should in no respect be regarded as dilators of the cervix, although frequently so considered. These are merely stimulants of uterine contractions in the absence of labor pains.

Manual dilatation, both complete and partial, has doubtless been performed many times by nearly every practitioner of general medicine, and in many cases with the greatest satisfaction with respect to results. In the writer's experience, it has proved of the greatest value as a means of partial dilatation of the rigid cervix in the presence of the tedious and exhausting but inefficient pains of the first stage. For this condition it is best done under primary anesthesia, all that is necessary being accomplished during one or two uterine contractions. The uterine contractions are thereby inhibited for only a few minutes, but the patient is often thus enabled to secure a short period of rest or sleep, which is of material aid to her in completing the labor. The writer has used this expedient a great many times, and has found it much more satisfactory and efficient than the administration of chloral, which is now rarely used. If carefully done, the method will seldom give rise to cervical lacerations.

If the membranes are unruptured, one effort of dilatation under primary anesthesia has always been sufficient in my cases. With ruptured membranes, however, and a rigid cervix, partial manual dilatation finds its greatest value for tedious labor. With a small os, a rigid cervix, ruptured membranes, and the patient becoming worn out from inefficient pains, intermittent manual dilatation, if I may be allowed the use of this term, is better and safer than complete manual dilatation performed at one sitting. That is, partial manual dilatation may be repeated several times, with an interval of an hour or more between, with perfect safety in a dry first stage where the patient is apparently making no progress herself. The intermittent manual dilatation is much safer for the integrity of the cervix than is uninterrupted complete dilatation, and the repeated primary anesthesia at this time amounts to no more than does the giving of ether with single pains in the second stage.

It may sometimes seem that there is no appreciable progress on the part of the patient in the intervals between the dilatations, even with severe pains, and yet

there is in reality progress, and that of an important nature. If carefully looked for, this is shown in the drawing up of the cervix which tends toward its ultimate obliteration or disappearance over and above the fetal head. It is clear, I think, that if complete manual dilatation is performed at one time in such cases, the cervix does not become completely obliterated or taken up in the natural manner, but usually hangs down in the vagina as a sort of border or short curtain around the head. This often gives rise to difficulty in case of a subsequent forceps operation, particularly the anterior portion of the cervix which may obstruct the head. Moreover, I believe this condition is a frequent cause of lacerations to the cervix. As an illustration of this method, recently I gave ether three times and did partial manual dilatation each time in a young primipara with a long and exhausting first stage. This amounted in the end to complete manual dilatation. A high forceps operation was finally necessary, and as a result of so much interference I expected more or less impairment of the cervix, but on examination of the patient four weeks after delivery I was much gratified to find that there was absolutely no tear.

Manual dilatation has, however, always found its widest use in cases calling for rapid dilatation and delivery, and in such is undoubtedly a method of the greatest value. In placenta previa and in eclampsia it is most frequently used.

Complete manual dilatation of the cervix of the pregnant uterus, especially in primiparous cases, is a very exhausting and worrisome procedure, and it not infrequently requires more than an hour to accomplish. It exhausts first one hand and then the other of the operator, and the assistant is often asked to aid because of the severe labor involved. Nothing that I know of in the whole range of surgery is so difficult and so exhausting as the complete manual dilatation of the rigid os, followed by delivery in a primipara at or near term. Moreover, the operation is often unsatisfactory because when it is completed as far as possible, and the closed fist may be inserted and pulled through the cervix, even then the dilatation is not sufficient to admit of the passage of the fetal head at full term, and there is often sufficient delay from this cause to interfere with the birth of a living child. Moreover, after the severe strain and the cramped position of the hands necessary in manual dilatation, the operator is in no condition to perform an operation and to do justice to himself and his patient.

With the various forms of dilating bags I have had a very limited experience. The small fiddle-shaped rubber bags of Barnes were never efficient and are, I believe, practically obsolete, although they still figure in many text-books. The cone-shaped inelastic bag of Champetier de Ribes undoubtedly has certain merits as a dilator of the cervix and also has many warm admirers. It is used more or less extensively as a dilator with ruptured membranes, and also to promote contractions in uterine inertia. Abroad, it is also used in the treatment of placenta previa, where in Dublin, I believe, it finds its chief advocates for this condition. The great objections to its use are that it is often difficult to properly insert; there is danger of its displacing the presenting part at the pelvic inlet; it frequently results in prolapse of the cord, and too violent uterine contractions are likely to be induced.

The use of tents as cervical dilators has, I believe, been almost wholly given up, although they are occasionally advised by writers. Their use is not to be recommended because of the slowness of their action and chiefly because of the impossibility to render them aseptic.

Deep cervical incisions, in place of mechanical dilatation, is a method recently advanced by Dührssen of Berlin, in whom it finds a very strenuous advocate. He is also a great opponent of instrumental dilatation chiefly on the ground of the danger of deep tears, but his opinion can not be considered altogether unprejudiced because of his own operation. Dührssen's method has not been practiced to any great extent in this country or abroad so far as I am aware, outside of his own immediate circle.

That there is a certain considerable and legitimate need and demand for a mechanical dilator of the cervix in pregnancy and in labor is, I believe, plainly evident. This demand is attested by the various instruments which have already been devised for this purpose, although no one of these, except the recent one of Bossi, has ever met with much approval outside of the hands of its inventor.

Considerable controversy has recently been aroused, particularly in Germany, by the introduction of Bossi's dilator, which has had an extensive trial there and in England. Many men have used it successfully and without serious damage to the maternal soft parts. On the other hand, some men denounce it as a dangerous instrument and declare that any form of instrumental dilatation of the cervix is an unsafe procedure. I have myself used the Bossi dilator in two cases of eclampsia demanding rapid delivery, and with the greatest success. Both patients were primiparæ, and in neither was there appreciable laceration. One required nineteen minutes and the other thirty minutes for complete dilatation.

Any contention over the use of methods or of instruments can be settled, I believe, in only one way, and that is by the results of the individual operator. If one finds that by adopting certain methods he obtains better results than by others, then that method is by all means the one for him to pursue. Other observers may get different results and naturally make their deductions accordingly.

To the average man the operation which accomplishes the result in the easiest manner and with the least damage is the most satisfactory, and that operation, whether it be by hand or by instrument, is the one for him to adopt. There seems to be nowhere any hesitancy in the employment of forcible dilatation of the cervix, but it is altogether a question of how it shall be performed. I have no doubt that forcible instrumental dilatation of the cervix will in some cases, even in the most skillful hands, cause moderate laceration of the cervix, and very likely in unskillful hands occasionally deep tears. Why should this not be so with an instrument? We all know that it does frequently occur with dilatation by the hands, and that dilatation of the cervix without laceration is often impossible of attainment. Can any one describe any method of forcible dilatation which does not give rise to lacerations, or can any one point out any number of cases which have been dilated manually which do not show them?

The deepest laceration I have ever seen—one extending deep into the broad ligament—has recently been under my care for repair, after manual dilatation at the hands of a man who opposes the use of the instrument. I have also known of at least two cases of rupture of the uterus from manual dilatation. Even cases in which

the delivery is entirely taken care of by Nature show deep lacerations. What gynecologist has not seen many deep bilateral lacerations in women who have had absolutely normal labors? There always is, and probably always will be, more or less danger of lacerations in any form of artificial dilatation of the cervix for rapid delivery, no matter whether this is done manually or by instruments. It is practically impossible, in my experience, to dilate a primiparous cervix completely by hand and do a rapid delivery without causing lacerations of the cervix. Undoubtedly, the colpeurynter does this better and with less injury than any other method, but even this is not free from objections on this score.

The danger of tearing the tissues is, I believe, not as great with the metal dilators, if they are used properly and carefully, as it is with the hand attempting to force itself into the closed cervix. With manual dilatation it is often not a question of merely causing tears, but so rigid is the cervix that it becomes largely a question of being able to apply sufficient force to get the os open in some way and of pushing the hand through, regardless of the integrity of the cervix. In many cases where the hand is the agent for dilatation the cervix yields only by tearing.

With the mechanical dilator the force expended can be accurately gauged and uniform power and pressure applied to the cervix, and by keeping the tissues constantly on a moderate tension, letting up a little occasionally to observe its effect on the cervix, the tissues are stretched and give better than by such jerky and irregular force as may be applied under manual dilatation.

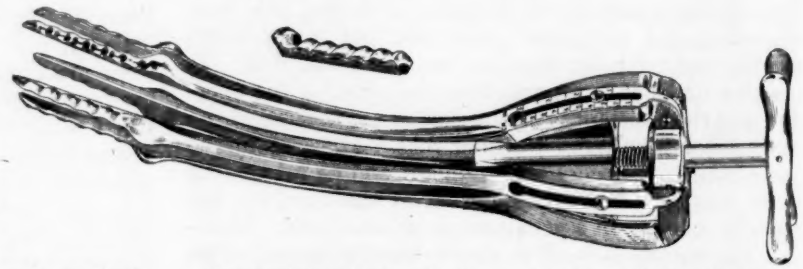
I do not wish it to be thought that I believe that manual dilatation of the cervix is to be superseded by instrumental dilatation or even that its field is wider than that of the former. Manual dilatation of the cervix in labor is a procedure of great usefulness, and is considered by many men to be the only safe method, and is the only method used by them. In cases of soft multiparous cervices, in the presence of old tears and in placenta previa, I believe that manual dilatation is usually much better than any form of instrumental dilatation. Indeed, in these cases it is my opinion that instrumental dilatation is usually contraindictated, excepting only certain instances where dilatation of the cervix may be done by some form of the colpeurynter. Instrumental dilatation is best done directly under the eye of the operator who can see and observe the cervix as it dilates and also the extent of each tear as it occurs. With a tear thus easily located, it is a very simple matter, as I have found, to put one or two stitches into the torn edges, although this is rarely necessary.

Granted that instrumental dilatation is permissible in certain cases, I believe it needs no demonstration that a dilator for the pregnant uterus to be efficient must exercise lateral pressure against the inner surface of the cervix. The insertion or pushing of conical-shaped bodies into the cervical canal suffices for slight degrees of dilatations for curettage, but for delivery sufficient dilatation can not be accomplished in that way.

The hand is virtually an instrument of the cone type, and whatever method of manual dilatation is employed the force is essentially that of a cone or wedge. The methods of Edgar and Harris overcome this to a certain degree, but are not applicable to all cases nor is complete dilatation accomplished by these alone.

Bossi of Genoa several years ago brought out his mechanical dilator, although it is only within a year or two that it has attracted much notice. It has proved so far the most efficient instrument yet put before the medical public for rapid dilatation of the cervix. The instrument is of metal with four arms made to expand by means of a series of levers controlled by a single screw. The instrument is undoubtedly a powerful one and able, with the exercise of considerable force, to accomplish the object for which it was designed. The chief criticism to be made of the instrument is that its mechanism is very complicated and it is so put together with its numerous parts, many levers and screws, that it is practically impossible to take it apart for cleaning. This feature renders strict asepsis impossible and is, of course, a *sine qua non* in any surgical instrument at the present time. The instrument, being of metal, may be boiled, but its many slots and crevices will harbor surgical dirt, so that in a very short time mere boiling would be inefficient. It is surprising that this very objectionable feature of the instrument has not elicited criticism before now.

In my opinion, the best feature of Bossi's instrument is that of the removable metal tips, which have been adopted by others, myself included. These admit of an instrument with a small point for use at the beginning of dilatation, while as the os becomes larger and the tips are applied, the pressure is distributed over a broader space so that there is less liability of cutting or tearing the tissues.



Recognizing the need of a mechanical dilator for emergency use I have designed an instrument which I believe will ultimately be found to fulfill every purpose required in an instrument of this kind. It is a five-bladed instrument, the tips of which are made to spread by an advancing cone moved by a screw and a handle. The instrument is made in a thoroughly aseptic manner with a limited number of parts. Each part is easily detached for cleaning purposes and there is no opportunity for the instrument to harbor surgical dirt.

The instrument was first designed for six arms, but I believe five is a better number, for the reason that the pressure is better distributed in five than in six points, no two arms coming directly opposite one another and, therefore, there is less danger from lacerations laterally, where they almost always occur.

Instrumental dilatation is best performed with the patient turned across the bed or on a table in the lithotomy position. A weighted perineum retractor or a broad Sims speculum is used, the anterior lip of the cervix being seized by a double hook and brought into view. The instrument is then inserted without the broad metal tips and dilatation carried to about three centimeters. when the instrument is removed, the tips applied and dilatation completed with them in place. The dilatation should be completed to about four inches by the scale in order to allow sufficient room for the fetal head. A scale in centimeters and inches indicates the amount of dilatation.

The use of the instrument gives one the greatest feeling of security because of the comparative ease with which the work is accomplished directly under the eye of the operator, where the speed may be increased or diminished according to the readiness with which the cervix stretches. A moderate-sized Hanks dilator is sometimes necessary to start the dilatation before the cervix will admit the tips of the instrument, but this is rare in pregnancy. The unopened os can be fully dilated in from twenty to thirty minutes. With the instrument it is not so much a question of how fast the os may be dilated, but, on the contrary, it is altogether a question of how fast the cervix will admit of being stretched, and only so fast should the dilating arms be expanded.

The use of the instrument is indicated mainly when rapid delivery is necessary and chiefly in eclampsia. It should be used only with a rigid cervix. The dilator is also an excellent instrument for the induction of abortion or labor, acting with greater quickness and certainty than any method involving the introduction of a foreign body into the uterus. It will excite contractions in the presence of uterine inertia, and sometimes even when the patient is anesthetized.

In deciding on the propriety of the use of an instrument for rapid dilatation of the cervix one does not have to answer only the question whether or not instrumental dilatation causes lacerations of the cervix. We know that manual dilatation of the cervix frequently does produce extensive lacerations. The question at issue, then, is whether the instrument will generally produce more extensive lacerations than manual dilatation does. This question can not be answered at once, but so far the writer's experience leads him to believe that it does not. In any event, many cases are so difficult of dilatation that the instrument becomes practically a necessity and is a great boon to the operator.

This instrument was devised particularly for use in difficult dilatation in connection with the termination of pregnancy in emergency work. For a number of months, however, the writer has been using his dilator for all purposes of cervix dilatation, and it has been found very efficient for dilatation before curettage. With it wider dilatation of the multiparous cervix can be secured than by any other method, so that in certain cases where it may seem advisable, sufficient dilatation may be obtained to introduce the finger and explore the cavity of the uterus.

THE ETIOLOGY OF YELLOW FEVER.

AN ADDENDUM.*

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In a paper entitled "The Etiology of Yellow Fever, a Supplemental Note,"[1] the Army Yellow Fever Board (which was then composed of the late Major Walter Reed, surgeon, U. S. Army, and the writer) stated that no results worthy of record had been obtained from the examination of infected mosquitoes, either when dissected in the fresh state or when studied in serial sections after being hardened and embedded. They also reported that two out of three non-immunes had been infected with yellow fever by the subcutaneous injection of 1.5 c.c. of blood serum drawn from a yellow fever patient and subsequently passed through a new Berkefeld filter which was afterward found to be impervious to the *Micrococcus aureus*.

In the latter part of July of the present year there appeared from the Government Printing Office the Report[2] of Working Party No. 1 of the Yellow Fever Institute of the U. S. Public Health and Marine-Hospital Service. These observers (after repeating some of our experiments) presented additional confirmatory evidence in support of the mosquito theory of the transmission of yellow fever and in that respect as well as in the negative results of their blood examinations their conclusions agreed with those of the Army commission. They reported negative results, however, from two (subcutaneous?) inoculations with fresh yellow fever serum after it had been passed through a Berkefeld filter. The quantity of filtered serum injected in these experiments was in one instance one forty-fifth and in the other one-fifth of that used in our own cases.[3]

The most interesting and striking feature of the report was the description of a protozoan parasite to which the name *Myxococcidium stegomyiæ* has been given. This parasite was found with regularity[4] in the appropriate mosquitoes that had bitten patients affected with yellow fever, these mosquitoes after varying periods being killed, sectioned and stained. Simple staining with Bismarck brown or hematoxylin were the methods used by these observers for the demonstration of the parasite. Five forms are described: (*a*) fusiform bodies found in the stomach and ventral diverticulum;[5] (*b*) fragmentation bodies lying in an albuminoid mass within the same diverticulum;[6] (*c*) compact aggregations of spores (called oöcysts) occurring in spherical masses[7] in similar albuminoid material in the same location; (*d*) sporoblasts (?) appearing as single or aggregated spherical or ovoid cells in the albuminous material in the diverticulum and in the tissues of the thorax;[8] (*e*) spores (?) containing sporozoites (?) in the salivary glands.[9] One or more of these stages were said to have been found in a large proportion of the infected mosquitoes that were killed not earlier than the third day after being fed on the blood of patients during the second, third and fourth days of the disease. The cycle of development of these so-called animal parasites as given by the authors is about as follows: On the third or fourth day, after the disappearance of the blood, the stomach was found to contain varying numbers of small fusiform-shaped protozoa arranged singly or in groups and containing a central, oval nucleus. Certain of these forms (budding forms) were interpreted as indicating a terminal conjugation; after conjugation the resulting zygotes migrated through the stomach wall into the diverticulum and underwent further development in a mass of albuminoid material in the latter sac. Here were found also the fragmentation bodies and oöcysts (?), the latter represented by rather compact spherical aggregations of round or ovoid bodies, the sporoblasts (?). After their liberation these sporo-

* Read at the Thirty-first Annual Meeting of the American Public Health Association, held at Washington, D. C., October, 1903.

1. Read before the third annual meeting of the Society of American Bacteriologists, Chicago, Dec. 31, 1901, and published in Amer. Med., Feb. 22, 1902.

2. Report of Working Party No. 1, Yellow Fever Institute.—"A Study of the Etiology of Yellow Fever," by Herman B. Parker, Assistant Surgeon; George E. Beyer, Acting-Asst. Surgeon; O. L. Pothier, Act.-Asst. Surg., March, 1903, Washington, Government Printing Office.

3. Reed and Carroll: Amer. Med., Feb. 22, 1902.

4. Report of Working Party No. 1, Conclusion 3, p. 8.

5. Figure 15 of the report.

6. Figure 16 of the report.

7. Figures 17 to 24 of the report.

8. Figures 25 to 28 of the report.

9. Figures 29 and 30 of the report.

blasts wandered into the thoracic end of the diverticulum, passed through its wall and the tissues of the thorax until the salivary gland was reached. After penetration of the gland sporozoites were developed and liberated.

Availing myself of the announcement that type specimens were preserved in the collection of the Hygienic Laboratory of the U. S. Public Health and Marine-Hospital Service, I requested permission to examine them, and I desire to acknowledge here the great courtesy and kindness extended to me on two such occasions by Dr. Herman B. Parker, the chairman of the working party. On subsequently re-examining our own sections

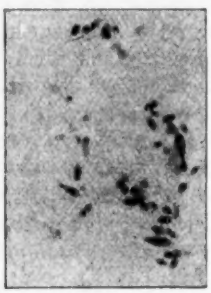


Fig. 1.—This is Figure 15 from the Report of Working Party No. 1, etc., and shows the fusiform bodies found in the stomach and diverticulum of infected mosquitoes.

of infected and non-infected mosquitoes which had already been studied more than two years before in conjunction with my honored colleague, the late Major Walter Reed, surgeon, U. S. Army, and Dr. William M. Gray,[10] microscopist to the Army Medical Museum. I was unable to satisfy myself that a single one of our infected mosquitoes contained any of the fusiform, round or oval bodies described in the report of the working party of the Yellow Fever Institute, but forms

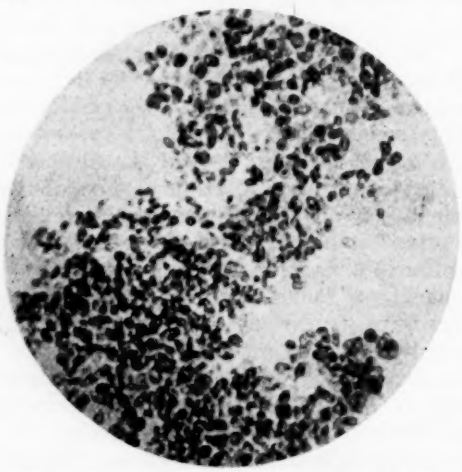


Fig. 2.—Photomicrograph, showing yeast cells in the diverticulum of a non-infected banana-fed insect from Havana. Spherical cells predominate, but fusiform and budding (conjugating?) cells are also shown. ×600.

similar in appearance to those shown in Figure 16 of the report were occasionally found in the stomach contents. From their striking inequality in size and the absence of any structural details in these "fragmentation" forms, I regarded them even in the type specimens above referred to as masses of amorphous granular material. The bodies containing sporozoites[11] (?) which were found in the salivary gland have been abandoned by these investigators because they no longer regard them as of importance.[12] It is noted that in a more recent article by the chairman of the working party all mention of these supposed sporozoites is omitted.[13]

The report does not state in what relative number of insects each of these forms was seen, but I learned from Dr. Parker, on inquiry, that the forms interpreted by

Fig. 3.—Photomicrograph, showing fusiform and budding cells in the diverticulum of another non-infected banana-fed insect from Havana. ×600. These mosquitoes were sectioned and examined early in 1901.

them as fusiform protozoa were the only ones found to be constantly present. These are described as 3 to 4 microns long by 1.5 to 2 microns broad, and containing a nucleus.[14] Appearances interpreted as evidence of conjugation are seen in certain of these forms where two of the ovoid bodies, varying more or less in size, are joined by a slender protoplasmic constriction[15] (see Fig. 1); others show a minute bud projecting from one or both poles. The nucleus appears as a small brightly refractive unstained spot when the bodies are stained with hematoxylin or Bismarck brown, either of which colors the whole cell. The bodies that impressed me as being of the greatest importance, if constantly present, were the

Fig. 4.—Photomicrograph, showing the ellipsoid yeast obtained from banana. Deep colonies in an agar culture two days old. Stained by Gram's method. ×600.

oöcysts (?) in the albuminoid mass[16] and the sporoblasts[17] (?) in the connective tissues of the thorax.

With these pictures fresh in mind, on re-examining our slides prepared from infected mosquitoes, I failed to find any of the forms described, excepting, of course,

10. Practically all of our insects were embedded, cut and mounted by Dr. Gray.
11. Figures 29 and 30 of the report.
12. Dr. Herman B. Parker, chairman of the party, is my authority for this statement.
13. "The Etiology of Yellow Fever," by Herman B. Parker, M.D., Jour. of the Assn. of Mil. Surg., vol. xiii, No. 4, Oct., 1903.
14. Report of Working Party No. 1, etc., p. 31.
15. Loc. cit., Figure 15.
16. Figure 23 of the report.
17. Figures 27 and 28 of the report.

the "fragmentation" bodies[18] to which I could attach no significance. On re-examining sections of normal (non-infected) mosquitoes the results were different, for in one of these, cut in cross section, the ventral diverticulum showed large numbers of spherical and fusiform cells, some of them corresponding in size and form to those described by the working party, but stained brilliantly with eosin (see Fig 2). The majority however, were spherical and a few were elongated into large rod forms resembling detached hyphæ. The smallest contained a single refractive spore, of minute size. The larger fusiform or flask-shaped bodies often contained several spores and in a few instances a single spore was seen to have passed into a projecting bud of protoplasm. A few hyphal filaments about 2 to 3 microns broad and 15 to 20 microns long exhibited a central row of spores arranged with a fair degree of regularity. The characters described justified the conclusion that these cells were blastomycetes that had gained access to the body cavities of the insect with food or water.

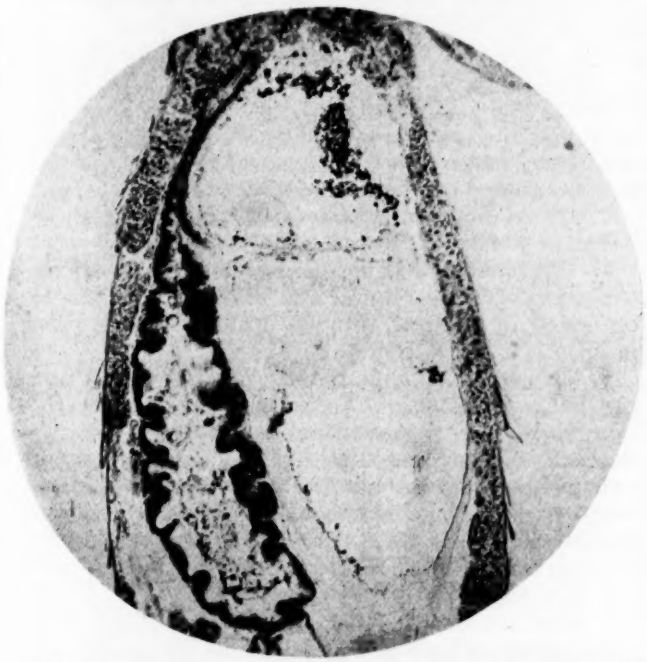


Fig. 5.—Photomicrograph, showing masses of yeast cells in the stomach and diverticulum of an insect fed on yeast culture and banana. Gram's method and Bismarck brown. Many of the yeast cells are decolorized and stained with Bismarck brown. ×50.

In another non-infected insect cut in longitudinal section, fusiform, ovoid and flask-shaped cells (see Fig 3) corresponding in every way with the fusiform stage of the *Myxococcidium stegomyiæ* as seen in their type specimens, were found throughout the ventral diverticulum, but were present in the upper portion of the stomach only and away from the blood mass. This insect had been permitted to take a meal of normal blood some hours before it died, and it is of interest to note that the organisms were found not within or near the residual mass of ingested blood, but only in the upper third of the stomach and associated with large numbers of bacteria. Their location suggests that instead of migrating through the wall of the stomach to the diverticulum[19] they were carried over mechanically from the diverticulum into the stomach.[20] The large majority of these cells showed a single central refractive vacuole (not spores in this instance) of minute size; a few contained two of them. Hyphal forms were not observed. The sections were stained originally with thionin and eosin on a number of slides and after decolorization the cells described were found also to stain perfectly with hematoxylin, Bismarck brown (these two were the methods used by Parker, Beyer and Pothier), and by Gram's method. Similar results were obtained

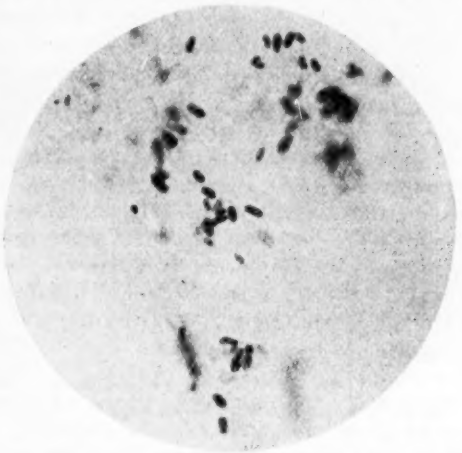


Fig. 6.—The same. A field from the diverticulum. ×600.

with smears from a culture of a white yeast kept in the laboratory. A week or so later I showed these slides to Drs. Parker and Rosenau of the Marine-Hospital Service and expressed the opinion that the fusiform bodies were yeast cells.

In the endeavor to account for the presence of these bodies in our non-infected mosquitoes and their absence from those that had been infected, it was recalled that the insects had been reared and kept in different buildings and fed differently for the greater part of the time at least. The non-infected mosquitoes were supplied

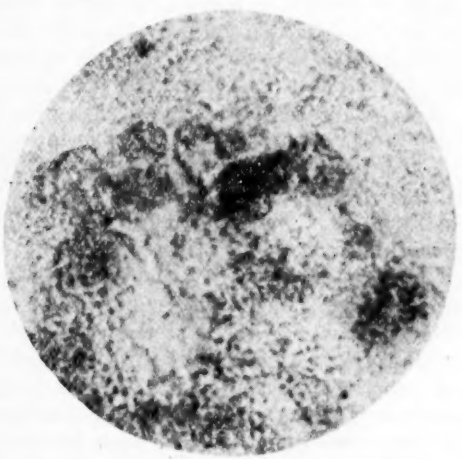


Fig. 7.—Colonies in the albuminoid mass in the diverticulum of a yeast-fed insect. Bismarck brown. ×600.

with banana; the infected insects referred to in this paper were at no time permitted to feed on fruit, but were given only sugar and water in separate vessels. Many of the infected insects were reared under these conditions. I can speak positively on this point, because from the establishment of Camp Lazear until its abandonment the infected mosquitoes kept there were under my exclusive charge and control.

To establish, if possible, the connection between overripe fruits and the presence of these bodies in mosqui-

18. Figure 16 of the report.
19. Report of Working Party No. 1, etc., p. 29.
20. Accompanying the residual food supply, as indicated by Nuttall and Shipley, "Studies in Malaria," Jour. of Hygiene, vol. iii, No. 2, April, 1903.

toes, I obtained some *Stegomyiæ* through the courtesy of Dr. Edmond Souchon of New Orleans and Dr. L. O. Howard of the U. S. Department of Agriculture, the latter kindly supplying me with fifty living insects, a large number of eggs and some insects preserved in alcohol. Fusiform yeast cells were found in the diverticula of a very small proportion of those that were received in alcohol. An ellipsoid wild yeast (see Fig. 4) was then isolated from an old banana and insects were subsequently fed on the fermenting fruit, to which this yeast in pure culture had been added. Previous sterilization of the banana was not considered necessary. As a result, I have brought about the presence of bodies identical in appearance with the fusiform stage of the so-called *Myxococcidium stegomyiæ* in nearly fifty insects that have never been in contact with a case of yellow fever, and have demonstrated them in large numbers, in the diverticula of four *male* insects that have been hatched and reared in the laboratory of the surgeon-general's office in Washington. I have been able to demonstrate the passage of these organisms from the ventral diverticulum through the natural opening of communication to the esophagus and thence to the stomach, where they are found only in the upper part of the organ, and are absent from the blood mass below, which is of large size and recently ingested. I have obtained in one instance as the result of feeding a male insect on wild yeast and banana, sections which show these organisms among the muscular tissues of the thorax, many of them lying in close proximity to the gland. Several insects similarly treated show the same bodies in the stomach and diverticula. (see Figs. 5, 6 and 7). They have not been found in fifty-two *Stegomyiæ* fed on yellow fever patients and kept under my immediate charge, a number of them having been used in reproducing the disease. Many of these mosquitoes that were kept for inoculation purposes died in the jars and are poorly preserved, but a number were killed and preserved immediately. The state of preservation of the insect, however, does not materially affect the staining properties of the blastomycetes, for in non-infected insects that have died in the jars and are crowded with bacteria, they color brilliantly and sharply. This would seem to indicate that they still retain their vitality after the death of the mosquito containing them.

Dr. L. O. Howard informs me that Dr. J. W. Dupree of Baton Rouge, La., writes him that he also finds the "*Myxococcidium stegomyiæ*" in non-infected mosquitoes at Baton Rouge.

Indirect confirmation of my results is seen in the report cited,[21] where it is stated that the parasite was not found in *Stegomyiæ* that had been applied to a malignant case of malarial fever and were then fed on blood, sugar and water. If a sufficient number of insects had been used and they had been fed on overripe banana or other fruit, as the working party recommends for yellow fever mosquitoes,[22] the supposed animal parasites would in all probability have been demonstrated.

On close examination of the liberated sporoblasts (?) shown in Figures 25 and 26 of the report referred to, it will be seen that these bodies show the variations in size and form and the typical budding process of yeast cells. This is particularly well marked in the left central and lower portions of Figure 26.

That ellipsoid wild yeasts may be pathogenic for the lower animals is shown by the researches of Rabinowitch,[23] who states also that these cells are stained by all the usual anilin colors. In the course of my own observations it has been found that typical ellipsoid forms in one of the mosquitoes were stained equally well with eosin, Bismarck brown, hematoxylin and by Gram's method.

Similar forms of blastomycetes have already been isolated from the broken-down nodules of spurious glanders, and the statement is made by Italian investigators that several parasites which are classified under the sarco- or micro-spordia belong really to the blastomycetes.[24]

As the yeasts are universally disseminated in Nature (and there are many species of them, only a relatively small number being pathogenic), it is not surprising that experiments with a single species have failed to show positive evidences of invasion of the tissues of the insect. This was obtained by the working party of the Marine-Hospital Service in only a few instances, and is obviously of no importance from the point of view of the etiology of yellow fever. On the other hand, it is regarded as of the greatest importance that bodies identical with the fusiform stage of this supposed protozoön, the only form found to be constantly present, can be easily reproduced anywhere by feeding to mosquitoes a culture of an ellipsoid yeast.

The results of the observations here recorded are believed to justify the following conclusions:

1. The fusiform stage of the so-called *Myxococcidium stegomyiæ* of Parker, Beyer and Pothier (1903), is not connected in any way with the transmission of yellow fever.

2. This organism appears to be not a protozoan parasite, but a yeast fungus. In its fusiform stage, the only form in which it was constantly present, it shows the characteristic budding, staining affinities and vacuolation or spore formation of a blastomycete, and it is found with considerable regularity in both male and female mosquitoes that have purposely been fed on overripe banana to which a pure culture of a wild yeast had been added in the laboratory.

3. The organism has not hitherto been found in repeated examinations of mosquitoes of the genus *Stegomyia* that have bitten yellow fever patients in the early stages of the disease, when such insects had been fed only on blood, dry sugar and water. This statement applies also to mosquitoes that are known to have reproduced the disease in human beings.

21. Report of Working Party No. 1, etc., p. 30.
22. Report of Working Party No. 1, etc., p. 28.

HOW TO WRITE A MEDICAL ARTICLE:

A PLEA FOR PLAGIARISM.

G. FRANK LYDSTON, M.D.
CHICAGO.

One of the most galling experiences of the middle period of one's professional career is the discovery that he has been wasting his energies in ambitions which might have been easily gratified by a very modest expenditure of force. How sad the experience of the man who has been for years desperately striving to attain by his pen a certain degree of fame to discover that he has not had discernment sufficient to point out to him the direction of least resistance. How selfish the man who, having learned, alas! too late, the error of his ways, does not give his younger and more un-

23. Zeitschrift f. Hyg., etc., Leipzig, vol. xxi, 1896, p. 11.
24. "A New Pathogenic Species of Yeast," etc., Fermi and Arnch Centralblatt für Bakt., etc., 1st Abt., vol. xvii, No. 17, May, 1895, p. 593.

sophisticated brethren the benefit of his experience. In endeavoring to aid my professional friends in securing the greatest amount of result from the least expenditure of time and the smallest possible wear and tear of gray matter, I feel that I am sowing seed that, beyond peradventure of doubt, must bear fruit.

The royal road to literary fame is plagiarism, a term which was originally invented for the protection of the hypersensitive feelings of certain giants of the ink bottle, who might have been shocked by the less euphonious term, literary theft. The plagiarist bears the same relation to the thief as does the master of shady business methods. We do not call the latter a thief, we call him a "financier."

The old methods of plagiarism are notoriously faulty. The strained efforts of the old-style plagiarist to be original have resulted in such a distortion of the plagiarized matter that its own father is wont to pass by his literary offspring without recognizing it. Such methods can only be deplored. The estrangement of literary families is cruel. To an author who takes pride in his original creations the sight of one that has passed through the sausage machine of old-fashioned plagiarism is well-nigh insupportable. Full many an author has had his life saddened by this experience.

Time was when plagiarism was sometimes condoned because of its skill and the beauty and value of the finished product as it issued from the plagiarist's mill. Shakespeare even has been accused of plagiarism, perhaps justly, but what a stately edifice was built on the matter plagiarized by the world's greatest master of word architecture. What though Boccacio's literary smut was composed chiefly of thrice-told tales from the Persian—he amplified and beautified them, and added a touch of salacity that required a higher civilization than the ancient Moslem for its production. Longfellow boldly "cribbed" the Kalevala, yet what well-regulated family can dispense with Hiawatha. The example of these shining lights of literature was pernicious, in that it led others into the error of believing that the soul of plagiarism lies in burying its victim a hundred fathoms deep beneath the plagiarist's own verbiage, it being, however, unnecessary to add to the value of the original production by a flavor of original thought. Out of the use and abuse of the good fairy, Plagiary, there has evolved a new school of plagiarists whom to know is to admire. The chief tenet of this new school is that plagiarism should be so conscientiously perpetuated that the most captious author can not accuse the plagiarist of mutilating his work nor of distorting the original matter. Still less could the rightful author fail to recognize his own. The new school has also exploded the fallacy that the quotation mark is a necessary feature of composition.

Strange to say, the new school is not without detractors. Indeed, I should have probably not felt compelled to rise in defense of the modern idea of plagiarism had it not been for one of these detractors, who saw fit to write me a letter calling attention to some of my stuff that had been recently presented in a new and attractive form by a distinguished exponent of the art of modern plagiarism. The letter reads as follows:

MIDWAY, PA., Oct. 11, 1903.

DR. G. FRANK LYDSTON, Chicago, Ill.

Dear Doctor:—Enclosed you will find an example of flagrant plagiarism. I believe the good of the profession demands the exposure of such men.

The article referred to was torn, unfortunately, from some medical journal whose title was not noted; but you can easily trace the article. It was published within the last four months. It is taken bodily from your article on "Gonorrhea in Women," published in your "Addresses and Essays."

I hope to learn that you have traced the article and required the editor to publish the facts. Respectfully yours, etc.,

A. L. RUSSELL, M.D

The paper to which Dr. Russell alludes is entitled:

THE REMOTE EFFECTS OF GONORRHEA IN THE FEMALE.

BY W. E. FITCH, M.D.

Member American Medical Association, American Editor's Association, Medical Association of Georgia, Medical Society of the State of North Carolina, Chatham County Medical Association; formerly Editor *Georgia Journal of Medicine and Surgery.*

SAVANNAH, GA.

The article was read at the last meeting of the Georgia State Medical Society, and appeared in the *Annals of Gynecology and Pediatry,* September, 1903.

I have rarely been so pained as by the perusal of Dr. Russell's letter. I had considered him one of the discerning ones: his letter proves me in error. I trust he will not be offended at my taking him to task. In the first place, my correspondent is in error as to the work from which the marrow of Dr. Fitch's article was taken. It was chiefly my text-book on "Genito-Urinary Diseases," published in 1899, that gave him his subject-matter, as witness the new terminology which has come in vogue since my collection of essays and addresses was published, in 1892. It could not have been taken from my work on gonorrhea, published in 1892 (Davis' Leisure Library series), because of a similar slight lack of correspondence in the language, although the ideas were the same. As the essay alluded to by Dr. Russell was published eleven years ago and was a pioneer contribution to the subject, the assertion that Dr. Fitch's article was taken from it is by no means flattering to that gentleman. If the assertion were true and Dr. Fitch had slept a few years more, he would have given us a medical Rip Van Winkle.

No, my dear Dr. Russell, you must not allow your prejudices to blind you to the fact that Dr. Fitch is thoroughly up to date. He was manifestly fair to me primarily, for, save the first paragraph, he copied his article from my latest production on the subject.

There is one feature of Dr. Fitch's work that even so captious a critic as Dr. Russell must admire, viz., the accuracy of the copy. I was greatly delighted to find that even the style had not been impaired. Not that I plume myself particularly on my style, but it is nice to be able to recognize one's own children. They may be strabismic, carroty-haired, and lopsided, still they are one's own and ink is thicker than water.

As for the verbiage of the copy, it varies from the original only to the latter's advantage. It will be further noted that Dr. Fitch is consistent throughout. He launches boldly into his appropriation, demonstrates his unerring accuracy—for which the editorial habit must be thanked—and sustains the standard he has set for himself for pages and pages.

A comparison of the parallel columns will prove my point.

DR. LYDSTON'S TEXT-BOOK.	DR. FITCH'S ARTICLE.
Gonorrhea in the female as now understood is more often met with in the special field of gynecology than in that of venereal diseases. This would seem, *a priori,* a trifle paradoxic, yet if the more advanced views be correct, the correlatives of gonorrhea and gleet in the male are too frequently regarded as simple and non-venereal in the female. Then, too, the more serious results of gonorrhea in women are at the present time relegated to abdominal surgery; a field that the gynecologist would fain monopolize. A knowledge of these conditions in their various phases, and a just appreciation of their relation to venereal infection, are nevertheless absolutely indispensable to the genito-urinary surgeon.	Gonorrhea in the female, as now understood, is most generally found in the practice of the gynecologist, rather than in the work of the specialist in venereal diseases. This would seem, *a priori,* a trifle paradoxic, yet if the more advanced views be correct, the correlatives of gonorrhea and gleet in the male are too frequently regarded as simple and non-venereal in the female.

In my earlier papers on the subject, "Essays and Addresses," 1892, and "Monograph on Gonorrhea," 1892, the construction of the foregoing paragraph was as follows:

Gonorrhea in the female is perhaps more often met with in the field of labor of the gynecologist than in that of the venereal specialist. This would seem from *a priori* consideration a trifle paradoxical, etc.

Dr. Fitch has done me the honor of appropriating the first few lines of this.

DR. LYDSTON'S TEXT-BOOK.	DR. FITCH'S ARTICLE.
The special consideration of the effects of gonorrheal infection upon the female sexual organs is of great practical value, the more especially as the *materies morbi* of the disease is primarily generated in women. It is a striking clinical fact that gonorrheal inflammation in the female rarely presents con-	The special consideration of the effects of gonorrheal infection upon the female sexual organs is of great practical value. the more especially as the *materies morbi* of the disease is primarily generated in woman. It is a striking clinical fact that gonorrheal inflammation in the female rarely presents consid-

ditions physically analogous to those observed in the male. Vaginitis of venereal origin is exceptional, and urethritis, the only real analogue, is excessively rare in women, and, moreover, does not always occur when virulent vaginitis exists. The rarity of virulent vaginitis, even in that numerous class of unfortunates from whom the male acquires the disease, is only explicable by: 1. The existence of latent gonorrheal processes of a greater or less degree of virulency in the female. 2. The gradual acclimation of the vaginal mucous membrane to the toxic products of organic decomposition slowly formed in the female generative apparatus. If it be accepted that the urethra of the male may become acclimated to morbid conditions existing in the female, as is often seen in the husbands of women who are infectious to any strange male with whom they may sustain sexual relations, it must also be accepted that the vagina becomes inured to contact of the irritating products of morbid conditions of the mucous membrane higher up: i. e., becomes tolerant of autogenetic poisons. This same tolerance explains the resistance of such women to the disease when they are exposed to contagion. 3. The relatively inherent toughness of the vagina, as a consequence of which it may serve as a vessel in which toxic materials can be elaborated without itself becoming infected by them. This inherent resistancy does not extend to the endometrium—cervical or corporeal—Fallopian tubes, and peritoneum; hence women may be affected by more or less active gonorrheal processes in these parts while the vagina is apparently healthy.

erations physically analogous to those observed in the male. Vaginitis of venereal origin is exceptional, and urethritis, the only real analogue, is excessively rare in women, and, moreover, does not always occur when virulent vaginitis exists. The rarity of virulent vaginitis, even in the *demimonde*, and that numerous class of unfortunates from whom the male acquires the disease is only explicable by: First, the existence of a latent gonorrheal process of a greater or less degree of virulency in the female; second, the gradual acclimation of the vaginal mucous membrane to the toxic products of organic decomposition slowly formed in the female generative apparatus. If it be accepted that the urethra of the male may become acclimated to morbid conditions existing in the female, as is often seen in the husbands of women who are infectious to any strange male with whom they sustain sexual contact, it must also be accepted that the vagina becomes inured to the irritating products of morbid conditions, of the mucous membrane higher up: i. e., becomes tolerant of autogenetic poisons. This same tolerance explains the resistance of such women to the disease when they are exposed to contagion.

The relative inherent toughness of the vagina, as a consequence of which it may serve as a vessel where the toxic materials can be elaborated without itself becoming infected by them. This inherent resistancy does not exist in the endometrium, cervical or corporeal, Fallopian tubes, and peritoneum; hence women may be affected by more or less active gonorrheal processes in these parts while the vagina is apparently healthy.

[A long paragraph is here omitted to save space, being practically the same in both columns.—ED.]

Noeggerath's theory as originally formulated implies: 1. That nearly all individuals who have at a more or less remote period contracted gonorrhea and have apparently been cured are capable of imparting infection to the female. Thus, most men who have ever had the disease, according to Noeggerath, sooner or later infect their wives.

2. That this infectiousness on the part of the male is in many cases latent, but may possibly become perceptible by the occurrence of urethritis of greater or less degree of severity, as a consequence of sexual intercourse.

3. That consequent upon this latent condition of gonorrhea in the male there occurs a similar latent infection of the wives of those affected.

4. That the majority of women who marry men who have at one time or another had gonorrhea, become sooner or later the subjects of uterine and pelvic inflammations.

Noeggerath's theory as originally advanced teaches:

That nearly all individuals (men) have at a more or less remote period of their lives contracted gonorrhea; have apparently been cured, but are still capable of imparting infection to the female.

That this infectiousness on the part of the male is in many instances latent, but may possibly become perceptible by the occurrence of a urethritis of a greater or less severity, as a consequence of sexual intercourse.

That consequent upon this latent condition of gonorrhea in the male there occurs a similar latent infection in the wives of husbands thus affected. . . . .

[Another long paragraph is here omitted from each column, being practically the same in each.—ED.]

With regard to the frequency of gonorrhea among the inhabitants of cities, Noeggerath said some years ago: "I do not know what the state of matters in other cities is; I did not know how we stood in New York until I questioned the husband of every woman who came under treatment; but I believe we may apply here the dictum of Ricord, that 800 men in 1,000 have had gonorrhea." He goes further and says: "I believe that I do not exaggerate when I say that gonorrhea in 90 per cent. of cases remains uncured. Of every 100 women who have married men formerly afflicted with gonorrhea, hardly ten remain well, the others are afflicted by some of the ailments which I have attempted to describe.

Making due allowance for the possibility of statistic errors and exaggerations in the original researches of Noeggerath and other workers in this field, it must still be admitted that gonorrheal infection may cause any or all of a series of disastrous results in the female pelvic organs, viz., metritis, endometritis, salpingitis, menstrual disorders and sterility may occur, according to the age and severity of the process and the character of the structures affected. . . .

Dr. G. Frank Lydson, in writing on this subject, says: "Eight hundred men in one thousand have had gonorrhea." He further states that 90 per cent. of cases remain uncured. This coincides, though a little conservative, with another prominent writer's views, who makes the statement, "Once a gonorrheic always a gonorrheic."

Of every hundred women who have married men formerly affected by gonorrhea, hardly ten remain well, the others are afflicted by some of the ailments which I have attempted to describe.

Making due allowance for statistic errors and exaggerations in the original assertions of Noeggerath, it must still be admitted that gonorrheal infection may cause any or all of a series of disastrous results in the female pelvic organs. Thus, metritis, endometritis, salpingitis, hydrosalpinx, pyosalpinx, ovaritis, parametritis, pelvic peritonitis, menstrual disorders and sterility may occur, according to the age and severity of the process and the character of the structures affected. . . .

[Another paragraph is here omitted, being practically the same in each column. There is also omitted from each column some paragraphs which do not appear in the other and are therefore immaterial.—ED.]

The disease is normally self-limited, and if complications can be prevented, not only is recovery likely to be secured within a reasonable period, but prolonged infectiousness may be averted. The higher the process extends the more prolonged and insidious will be the infection. The chief aim of the surgeon should therefore be the prevention of the extension of infectious inflammation. Rest is the best means of accomplishing this, sexual rest, especially be quite as important in this respect as in the male when similarly infected. Vaginal douches of potassium permanganate, 1 to 2000 to 1 to 1000 are a *sine qua non*. . . . Mercury bichlorid and silver nitrate are valuable, but by no means to be compared with the permanganate, which is the nearest approach to a specific at our command.

Urethritis and vesical complications demand balsams and alkalies internally, with the permanganate irrigations. Later on silver nitrate irrigations may be substituted with advantage. Instillations of permanganate or silver solution with a syringe may be useful, especially when the process shows a tendency to become chronic.

Anodynes and sedatives may be indicated in some cases, especially if complications occur or sexual irritation be marked.

The disease is normally self-limited, and if complications can be prevented, not only is recovery likely to be secured within a reasonable period, but prolonged infection may be prevented. The chief aim of the physician should be to prevent the extension of infectious inflammation. Rest is the best means of accomplishing this, sexual rest especially is of the greatest importance. Vaginal douches of permanganate of potassium, 1 to 2000, or 1 to 1000, are indispensable. Mercury bichlorid and silver nitrate are valuable, but not so trustworthy as permanganate of potassium.

Urethritis and vesical complications demand balsams and alkalies with the permanganate irrigations. Anodynes and sedatives may be indicated in some cases, especially if complications occur or sexual irritation be marked. If much pain and a frequent desire to void urine exist, urinary antiseptics and vegetable diuretics, as corn silk, triticum repens, etc., will give speedy relief. . . .

In the first paragraph of the parallel columns it will be noted that Dr. Fitch has substituted the word "practice" for "field of labor," and "specialist in venereal diseases" for "venereal specialist." The implied adverse criticism of my verbiage is accepted in the same spirit in which it is given. The delicate compliment to the specialist in venereal diseases implied in the intimation that Dr. Fitch does not consider him "venereal" is worthy of a Chesterfield.

The insertion of the word "*demimonde*" in the second paragraph shows a literary finish to which Dumas himself, the coiner of the word, were he living, could not take exception. The word lightens up the gloom of the otherwise turgid and heavy style for which I am noted, and illumines the pages with a brilliant forecast of future improvement in my composition for which I shall never cease to thank my confrère. I use the word confrère advisedly, not to be outdone in generosity, for I am sure my learned friend could ill spare the word *demimonde*, and I, therefore, reciprocate from my own scanty store of "furrin things."

Dr. Fitch has really gone out of his way to be generous to me. He has given me credit for views which I quoted from Noeggerath. There may be those who will suspect Dr. Fitch of a lack of good faith. He has misspelled my name, and, considering his accuracy as a copyist, that is a bit suspicious.

That Dr. Fitch is impartial is shown by the fact that he has appropriated a paragraph of Noeggerath's stuff. Perhaps this was to temper my self-conceit. I confess it was somewhat of a dampener to find that Noeggerath's verbiage was so essential a part of my original text that it could not be copied without it.

I was especially pleased to note that Dr. Fitch has quoted Bumm (Bumm is spelled "Burum," and Veit's "Handbuch" is presented as "Voit's") on the evolution of the gonococcus. Had he been alive to the possibilities, however, he could have found some ideas on this subject also in my text-book. He might have used these ideas as original matter, especially as my first papers on the subject were published about fifteen years ago, and appeared in my text-book four years ago. It would have been safe to use them, for they did not have a foreign label, and the American profession would have given such scant credit as it usually accords to home-raised ideas to Dr. Fitch. Taken all in all, Dr. Fitch's article is a most accurate presentation of the views and language expressed in my text-book. His conservatism in the matter of reconstruction of language is admirable. If his editorial training is responsible for his accuracy and conservatism, would that all editors used the same ink. The wisdom of conservatism as displayed by Dr. Fitch is especially evident if one considers how important it is not to garble another's statements on a scientific subject. Wisdom, accuracy, delicacy, good taste and—I was about to say, literary finish, but modesty forbids—what more would the critic have?

It occurs to me in passing that Dr. Fitch may have been actuated in part by the notion that I was dead. If so, his desire to perpetuate my work by putting it forth in such form as to be unmistakably mine, is highly commendable. He must, however, be more wary of accepting as authoritative rumors based on that fraternal wish which is father to the thought and a fungus on the sturdy old oak, competition. Prognoses given as a matter of professional courtesy and esteem are sometimes unreliable, not to say disappointing. It will, of course, be understood that I can not undertake to discuss Dr. Fitch's article. I can not attack it, because I have not yet changed the views expressed in the book from which the bulk of the article was taken. I can not particularly commend its scientific merits, lest I be accused of crass egotism.

If the easy road to medical writing pointed out in this article proves of value to any struggling aspirants for literary and scientific fame, I shall be well rewarded. If all who in the future copy the work of others are stimulated to emulate Dr. Fitch's example and copy so conscientiously that no quotation marks or allusion to the rightful author are necessary, medical literature will owe me much. My chief hope is that this communication may be incorporated in the history of American medicine as a clinical contribution to the study of —well, hypertrophy of literary gall.

New Appliance.

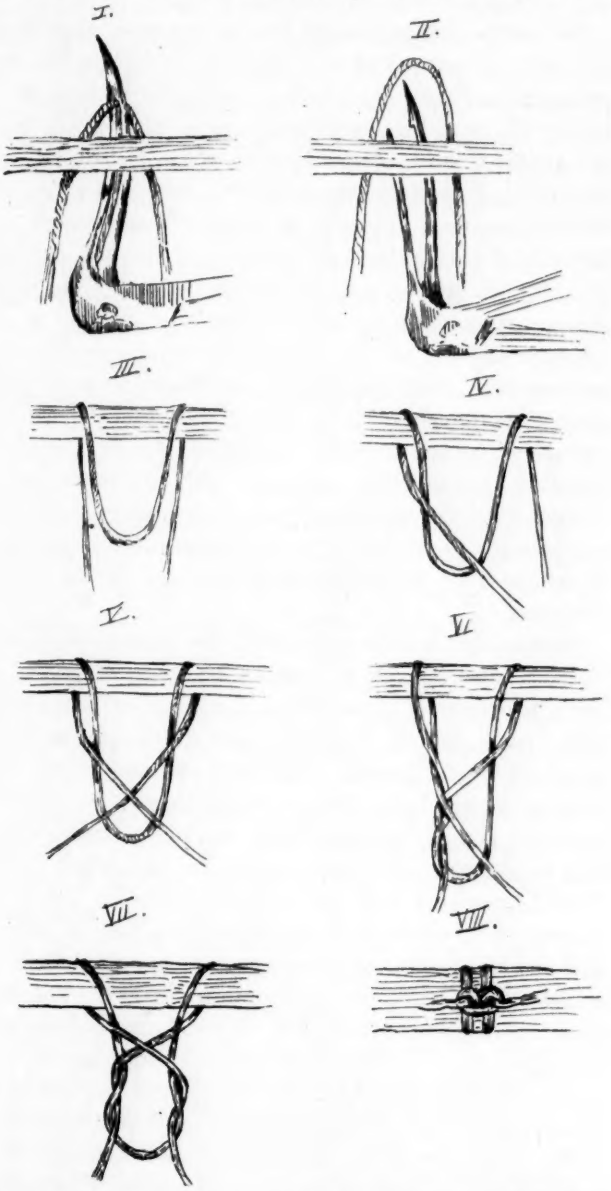
A SIMPLE AND EFFECTIVE KNOT.

H. L. NAHIN, M.D.
MILWAUKEE, WIS.

In tying the ovarian or uterine artery or any part of the broad ligament, the danger of secondary hemorrhage is always great. It is chiefly due to some defect in ligating the pedicle. The first loop formed in the reef or surgeon's knot is usually disturbed and loosened the minute the pressure of the surgeon's fingers is removed; while making the turn of the second loop the ends are made tense and the first loop is pulled up and consequently relaxed.

To overcome this difficulty I devised a knot which is simple in execution and safe in its not getting relaxed or loosened after it is secured in place, and which, if placed two centimeters from the cut end, will never slip off.

In tying the ovarian artery for instance, a loop of a double ligature is passed with the ligature carrier through the clear space in the broad ligament from before backward, as shown in Fig. 1; the loop is then released from the ligature carrier, as shown in Fig. 2; it is then brought forward by the assistant over the top of the broad ligament, as shown in Fig. 3; the free ends of the ligature are now separated by the surgeon holding the right end in the right hand and the left end in the left hand; he now crosses the left free end of the ligature to the right over and above the loop as shown in Fig. 4. Then he crosses in the same manner the right end of the ligature to the left over the loop as shown in Fig. 5. Now the free right end of the ligature is in the left hand, and the left end in the right hand *over the loop*. The surgeon now carries the right end of the ligature around behind the loop and forward *through* the loop to the left border of the inside of the loop, as shown in Fig. 6, and the left end in the same manner to the right border of the inside of the loop as shown in Fig. 7. The ends are now pulled snugly, separated, and with the ends of the index fingers pulled and at the same time pressed on the knot. An additional reef knot may be applied over this knot, but it can be dispensed with, as this knot is firmly interlocked and any



pressure or pulling up, down or sideways tends to bring the interlocked fibers of the ligature more snugly together.

Fig. 8 shows the knot complete after it is tied.

The same knot can be utilized with ease and safety when the broad ligament is to be ligated in sections. In such cases all it is necessary to do is first to bring out the loop with the ligature carrier, which is given to the assistant; then the free ends of the ligature are carried through another point embracing all the structures to be ligated, and the same procedure is followed as in the first description.

545 E. Water St.

Prophylaxis in Pediatrics.—There is no more promising field in medicine than the prevention of disease in childhood.—Holt.

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ACUTE PANCREATITIS.

The acute inflammations in the pancreas have been generally recognized as the source of trouble in the upper part of the abdomen only in very recent years, practically all important contributions on this subject having appeared since the publication of the lecture on this subject by Fitz of Boston in 1889. Interest in this affection has been specially stimulated since recent experimental studies have so definitely shown the connection between fat necrosis and pancreatic disease, for until this was recognized, fat necrosis was considered by many a distinct disease, instead of a pathognomonic symptom of pancreatitis. The evidence of association between gallstones and pancreatitis so clearly shown by Opie's observations, added another important reason for early operation in gallstone diseases, and attracted widespread attention, so that at present few surgeons would overlook the possibility of acute pancreatitis in any case in which acute symptoms were localized in the upper abdomen.

Most recent writers agree that the clinical picture is characteristic enough to make a probable diagnosis of acute pancreatitis quite within the range of possibility. The intense, colicky, epigastric pain which later becomes general; the intractable vomiting; the abdominal distention, particularly above the umbilicus; the tenderness and rigidity together with marked collapse, small and rapid pulse and often cyanosis are mentioned by all. The diagnosis is still more probable if this group of symptoms occur in a middle-aged man who is corpulent and has gastro-intestinal catarrh, arteriosclerosis or a history of alcoholism, gallstones or injury. The differential diagnosis, then, lies between pancreatitis and the other causes of acute abdominal symptoms in this region, as intestinal obstruction; perforating ulcer of the stomach or duodenum; ruptured gall-bladder or bile ducts, a phlegmonous cholecystitis and a gangrenous appendicitis; a positive diagnosis is generally admitted to be very difficult if not impossible in most cases.

With regard to the desirability of surgical treatment and the time at which it is best undertaken, there are wide differences of opinion. Some advocate immediate operation, others advise waiting until collapse passes off, while some even advocate waiting until a local abscess forms. Bearing on the question of treatment two recent papers are of considerable importance. Woolsey[1] reports three cases, all quite ill at the time of operation, but all of whom recovered after simple evacuation of a considerable quantity of fluid from the peritoneal cavity and drainage. Pels-Leusden[2] also reports three cases operated on in practically the same manner, with recovery of two and temporary improvement in the third case. Two of the patients were practically moribund at the time of operation, but improvement was immediate in all the cases after simple evacuation of the large accumulation of exudate and drainage. Both of these writers advocate early evacuation of the peritoneal fluid and the contained septic material and drainage. A small medium incision under cocain anesthesia is all that is necessary, and more extensive exploration is to be avoided in a patient in such a collapsed condition. Early operation, sometimes under cocain, is also recommended by Robson and Moynihan,[3] and was advocated by Hahn, who operated successfully in a case similar to those reported.

Unfortunately, a large proportion of patients who suffer from the severer forms of acute pancreatitis will die whatever method of treatment is adopted, but we believe that the early and simple operative procedure recommended above is the rational method to follow in these cases, for undoubtedly, as Woolsey says, a large percentage of the patients will die in waiting for a more favorable time for operation, just as would be the case if we were to wait to drain an appendix abscess rather than to take the disease in its early acute stage. Moreover, practically all agree as to the impossibility of making a positive diagnosis between acute pancreatitis and several other acute abdominal affections, all of which demand immediate operation if the life of the patient is to be saved. Quite probably the percentage of recoveries will be greater when such prompt and simple operative intervention is adopted as in the cases reported above.

1. Annals of Surgery, November, 1903, page 726.

2. Deutsche Zeitschrift für Chirurgie, September, 1903, vol. lxx p. 183.

3. Diseases of the Pancreas and Their Surgical Treatment, 1903.

THE SIGNIFICANCE OF INFECTION, HEREDITY AND PREDISPOSITION IN THE DEVELOPMENT OF PULMONARY TUBERCULOSIS.

It is a well-known fact that pulmonary tuberculosis is more common among the poor, the careless, the ignorant and the depraved in a community than among those belonging to the opposite class. It is likewise an authenticated observation that the disease seems to exhibit a predilection for certain houses, or rather that a disproportionate number of cases occur in such houses. The natural inference is, therefore, that special opportunities for transmission exist under such conditions, but a question has been raised as to the part played in this connection by heredity and predisposition. It has, for example, been noted that not all persons equally exposed are attacked; that certain families especially suffer, and that women are often the victims of the disease in connection with the puerperal state and lactation.

Some observations have been made into the questions at issue, but they have principally related only to tuberculous patients. Accordingly, Dr. E. Schwarzkopf[1] studied 354 female patients over 13 years of age—160 with and 194 without pulmonary tuberculosis—presenting themselves at the medical clinic of the University of Marburg. Men and children were excluded because of the etiologic significance of occupation, change in residence and association with large numbers of persons in the former and the relative rarity and often the difficulty of recognition of the disease in the latter, while the conditions referable to the women could be better noted and controlled. Only cases were considered in which the diagnosis was clear, merely suspicious cases being rejected.

Of the total number, 145—40.96 per cent.—had been exposed to infection by association with tuberculous patients, sometimes for years, while in 209—59.03 per cent.—no such exposure could be made out. Of the women that had demonstrably associated with tuberculous patients, 98—67.58 per cent.—became affected with pulmonary tuberculosis, and 47—32.41 per cent.—remained well. Of those that had not associated with tuberculous patients, 62—29.66 per cent.—became tuberculous, and 147—70.33 per cent.—remained well. Of the tuberculous patients, 98—61.25 per cent.—had demonstrably associated with tuberculous patients, and of the non-tuberculous patients, 47—24.22 per cent. Those that had lived together with several tuberculous patients, at once or in succession, suffered in larger number than those that had been exposed to but a single source of infection. The danger of such association was found to be the greatest between the fourteenth and the fortieth year. Infection during childhood was responsible with comparative rarity for pulmonary tuberculosis developing after the thirteenth year.

The evidence of hereditary acquisition was, according to Schwarzkopf's findings, no greater in tuberculous patients than in non-tuberculous patients. In fact, he claims, it was actually a little greater in the latter than in the former. The greater danger from the mother than the father is due to the fact that the former is more in the house, and thus is a more prolific source of infection. Of pregnant, parturient and nursing women, while the number exposed to infection was the greater, as compared with those not so exposed, the difference was not so marked as with respect to other influences.

The results of these observations are summed up by him as follows: In the development of manifest tuberculosis of the lungs, infection with tubercle bacilli, such as is brought about by association with uncleanly tuberculous patients under unfavorable external conditions, plays an important part. In women suffering from tuberculosis antecedent, opportunity for infection could be demonstrated in 61.25 per cent. of the cases, and in only 24.22 of non-tuberculous women. Almost every person—at least in the unfavorably situated portion of the community—is afforded opportunity for the taking up of isolated tubercle bacilli. In order, however, that pulmonary tuberculosis may develop repeated infection is necessary in the majority of cases. The danger of acquiring tuberculosis increases with the number of patients in the vicinity and with the duration of the opportunity for infection. Infection in childhood gives rise with relative rarity to pulmonary tuberculosis developing after the thirteenth year of life. This takes place much more frequently if renewed infection occurs. The taking up of tubercle bacilli in the period between the fourteenth and the fortieth year of life is particularly dangerous, and the danger increases up to about the age of forty years. The danger of a tuberculous patient to those by whom he is surrounded disappears when the patient observes suitable precautions with respect to coughing and expectorating. Schwarzkopf holds that mere hereditary predisposition has not the slightest influence on the development of manifest pulmonary tuberculosis, a wholesale generalization that appears hardly justified by so limited a series of observations. The existing opportunity for infection is, in his opinion, the determining factor, and on it the development of the disease is dependent. (Why such respectable percentages of the non-exposed became tuberculous and of the exposed remained well is not explained.) A number of injurious influences, in women first and foremost parturition and sedentary occupation, in men especially, certain injurious influences relating to the occupation, are capable not alone of aggravating an existing tuberculosis, but also apparently of constituting a predisposing factor in the development of pulmonary tuberculosis.

Schwarzkopf's article is an interesting and valuable, but not a conclusive contribution to the literature of the still unsettled problems of the individual etiology of tuberculosis.

1. Deutsches Archiv für klinische Medicin, lxviii, No. 1-2, p. 73.

THE ETIOLOGY OF YELLOW FEVER.

Not long ago the Yellow Fever Institute of the U. S. Public Health and Marine-Hospital Service issued the Report of Working Party No 1, in which is described a protozoan parasite found regularly in certain mosquitoes that had bitten yellow-fever patients. This organism is described in detail and given the name of *Myxococcidium stegomyiæ*. On the face of it this report appeared to be one of the most important contributions yet made to the much-vexed question of the etiology of yellow fever. The question was, Would it stand the test of scientific criticism?

In this number of THE JOURNAL Dr. James Carroll of the U. S. Army brings forward certain facts that tend to weaken one's confidence in the soundness of the conclusions of Working Party No. 1. Dr. Carroll shows that the fusiform stage of the *Myxococcidium stegomyiæ*

can not be connected with the transmission of yellow fever, and that the organism is a yeast fungus found quite commonly in mosquitoes fed on overripe bananas purposely besmeared with yeast culture. Added to this we have the important fact that Dr. Carroll has not been able to find the organisms in mosquitoes known to have reproduced yellow fever in human beings after they had bitten yellow-fever patients early in the disease, the insects having been fed only on blood, dry sugar and water. Undoubtedly the members of Working Party No. 1 will not suffer Dr. Carroll's destructive criticisms to pass unchallenged, and their reply will be awaited with much interest.

There is another episode connected with the discovery of *Myxococcidium stegomyiæ* that adds further variety to the history of Working Party No. 1, and that is the assertion by J. C. Smith of New Orleans that he was "the first to have interpreted correctly and given value to the things found in the bodies of the mosquitoes infected from yellow-fever patients." Mr. Smith has submitted the assertion that in the Report of Working Party No. 1 he has not been given full recognition for his services in working out the history of the alleged parasite in the mosquito.[1] In order to vindicate fully his assertion, Mr. Smith, or some one else, must establish that the bodies seen in the infected mosquitoes are animal parasites. Mr. Smith and Working Party No. 1 should now join hands again, this time in the effort to meet Dr. Carroll's attack; then, in the event of successful defense of their assertions, they may turn to the less serious task of satisfactorily adjusting the dispute as to recognition. On the other hand, if the *Myxococcidium stegomyiæ* proves to be a harmless yeast, then this attempt to solve the etiologic problem of yellow fever, like so many others before it, will pass in silence into history.

A NEW DEPARTURE FOR CITY HEALTH BOARDS.

One of the most valuable contributions to the subject of municipal sanitation is the recent introduction by the Department of Health of New York City of trained nurses for public-school service and for visiting contagious disease cases. As is usual in public undertakings, the initiative and early experimenting were due to private individuals. The residents of the Henry Street Nurses' Settlement, situated in one of the most crowded quarters of New York City, became deeply impressed by the neglect of contagious cases, which naturally can not be treated in the ordinary course of district-nursing.

In a report given in *Charities,* L. L. Dock, who is herself one of the nurses in this settlement, states that the supervision of the department of health is as complete and strict as is possible under the circumstances. Physicians are asked to immediately report contagious cases, and quarantine measures are adopted. Leaflets in several languages are distributed, giving explicit directions for domestic disinfection. In throat cases cultures are taken, and antitoxin is furnished free, and it is also administered by a physician from the department in response to calls from any part of the city. A medical inspector visits each contagious case regularly once a week to watch the progress and order disinfection. When the case terminates the rooms are disinfected, mattresses and bedding sterilized without cost to the patient's family, and the landlord is directed to clean and paint.

For three months last spring the nurses' settlement kept a nurse on contagious cases exclusively. Last June the department of health took over this service and organized municipal district nursing for contagious diseases throughout a definite area which could be managed by three nurses. A home was rented for them next the city diphtheria hospital, where they report daily. The department had six nurses at work among tuberculosis cases even earlier than this.

It is too soon to expect reports of large results; but no one familiar with tenement life in a great town can question the value of this service as an auxiliary to a general system of hospitals for contagious diseases. Such a system of hospitals is lacking in every American city so far as we are aware. It is still little more than planned in New York, and it will probably be long before the city possesses bed space for 75 per cent. of the cases, as we are told is the better fortune of London. The use of the visiting nurse is a unique and promising departure.

Even more unique and certainly more constructive is the use of the visiting nurse as an adjunct to the medical inspection of the public schools. Nurses are now attached to forty public schools in New York. Children who have trachoma, pediculosis, ringworm, eczema and other minor ailments which properly exclude them from school, are visited at home, mothers are instructed in caring for the diseases and the children are returned to school as promptly as possible. This service was begun when the alarming spread of trachoma among public-school children rendered necessary a school children's hospital for operative cases. Later the effort was directed to discovering the cases early enough to obviate the necessity for operation, and the system has gradually extended.

One of its best features is the early return of the children to school after absence for sickness and the consequent marked decrease in absenteeism and truancy. Under the usual system of medical inspection, the child is sent home with directions to have the scalp or eyes or ears treated. It is safe to say that in nine cases out of ten, the mother will not carry out the directions, and the case lapses into a sort of legalized truancy of indefinite duration justified by a more or less chronic ailment. Under the new system the nurse follows the child to its home, sees that the treatment is carried out

1. Science, 1903, xviii, 530-535.

and that the child duly returns to school. There is another large element of value in the hygienic instruction which the mother inevitably absorbs.

A RIGHTEOUS VERDICT AGAINST AN ANTIVIVISECTIONIST.

We have frequently called attention to the exaggerated statements and outrageous lies—no milder term will suffice—of the antivivisectionists, both in this country and in England, and to the uselessness, for this reason, of attempting to answer any of their so-called arguments. They make malicious and vindictive statements and these are reiterated in both countries, no matter who may be injured thereby, or whether or not they have been proved false. Without referring to more than one case, we cite that of Sir Frederick Treves, who has been, and still is, quoted as holding to views that he has repeatedly and publicly denied.

Last week in London, after a trial before Baron Alverstone, Lord Chief Justice of England, a verdict of $10,000 damages was rendered against one of the leading antivivisectionists of England—an event that, it is to be hoped, will have a tendency to check the zoöphiles in their "lust for slander." The defendant in the case was Stephen Coleridge, son of the late Lord Chief Justice Coleridge and a relative of the poet. He is the secretary of the London Antivivisection Society, and a leader in the perpetual antivivisection movement of Great Britain. At a public meeting held in London last May, he charged Dr. W. W. Baylis, a physiologist of London, with gross and deliberate cruelty while conducting experiments on dogs in his laboratory. It was alleged that no anesthetic had been administered, and that the struggles and sufferings of the animals were heartrending, etc. Dr. Baylis resented the imputations made against him, and did what it would be well for others in like circumstances to do, commenced proceedings for libel and slander. These have resulted in a verdict in his favor and the substantial damages of £2,000. In the trial it developed that Coleridge's only authority for his allegations were the statements of two young women who attended a lecture given by Professor Baylis at which demonstrations were made on a dog. The prosecution proved that the A. C. E. mixture was used through a laryngeal tube, and that the dog was thoroughly anesthetized.

According to cable reports, the verdict was a popular one, and was received with acclamation not only in the court room but throughout London. This is certainly gratifying, for experimental medicine in Great Britain has been practically throttled for years by absurd restrictive legislation. A man of Coleridge's social standing makes him more powerful for good or for harm than one of less prominence, but when he made public charges based on the statements of two women, without taking the trouble to verify the statements and without giving the one accused a chance to make an explanation, he was doing what the average antivivisectionist is in the habit of doing. Perhaps with prospective damages staring them in the face, Coleridge and his friends will be more chary in the future of making serious charges on evidence which will not stand legal scrutiny.

Professor Baylis is to be congratulated on having the courage to defend his good name, and should be thanked by all who have the interest of science at heart for the fight he made against these rabid and bigoted opponents of the splendid work that is being done in behalf of progressive medicine and for the relief of human suffering.

AN UNPROVED LIBEL ON THE PROFESSION.

During the first day's trouble with the Chicago striking street-car men, one of the Chicago papers printed a paragraph to the effect that when one of the non-union workers was injured and taken to a nearby drug store, the physician who was called to attend him refused to do so. The report stated that the physician asked the man for his union button and on being informed that he had none and did not belong to the union, the physician refused to do anything for him. We immediately made inquiry as to the truth of this and found that the information had been telephoned in by a reporter and that this reporter got his information from a druggist. The druggist on being questioned, acknowledged that he knew nothing about it. The probability is that the report was not true. We sincerely hope that no physician would so far forget himself and his duties to humanity as to refuse to render professional aid, no matter who the injured might be or what the circumstances. Some of the methods of the striking trades unionists are only worthy of the most sedulous avoidance—above all by honorable physicians.

A SUGGESTION REGARDING RECIPROCITY.

Elsewhere we print a communication from one of the members of the Board of Registration and Examination in Dentistry of New Jersey and also a resolution passed by the National Board of Dental Examiners, a voluntary body as we understand it, composed of members of the different state dental examining boards. The resolution contains a suggestion which we think might well be applied as one of the educational requirements for registration by those state licensing boards which are trying to arrange for reciprocity with others. The suggestion is that when an individual who is licensed in one state desires to move to another, he shall take with him a certificate from the registration board of his own state. If a man has a good standing among those with whom he has been living and can be vouched for by his state board as having conducted himself as he should and as being worthy to continue practice, a certificate of this ought to carry weight. We do not wish to suggest that this certificate alone should be all that is necessary, but it certainly would be a good thing to require on the part of the licensing boards. The proposition of having a sort of letter of dismissal from one state to another is a useful one in any case, but especially as a qualifying condition on which the applicant may be granted a license.

NEWSPAPER MEDICINE.

Newspaper medicine—of course we mean medical matters as described in newspapers—is sometimes correct, often startling and usually funny. Occasionally we find items that are both startling and funny, and last Sunday's Chicago *Tribune* contained one of these. It came in the form of a cable dispatch from the London correspondent. The item has several lines of display heads, the leader being: "Rivals Surgery Done by Lorenz." We are told that a Dr. Rabey of London contends that:

Numbers of hip disease cases are really nothing more than hip dislocations, which cause the leg to wither as the muscles become dry, and the natural oil which ought to feed the leg forms abscesses. When there are diseased bones, he admits he can do nothing. His method is to reset the dislocated bone after softening the tissues and ligaments around the affected part. Dr. Rabey, in contrast with Lorenz's half-hour performs the operation in from three to five seconds, and also instead of making his patients lie from six to twelve months in plaster paris Dr. Rabey promises to have them up walking about inside of forty-eight hours.

Further on we are told:

He operated yesterday on a youth of 18 who, when he was 11, was in the hospital for six months for hip disease, and since then he has walked on crutches. His left leg is four inches shorter than the right. Several weeks ago he commenced preparing for Dr. Rabey.

The preparation in this case consisted of the application of poultices of olive oil and mustard to the hip. With such preparations, of course the operation was greatly simplified, and so we need not be surprised when it is stated:

The operation yesterday lasted three and one-half seconds, immediately rendering the leg two and one-half inches longer. "He will be able to walk on Sunday" was Dr. Rabey's parting observation.

We are further told that Dr. Rabey "has dealt successfully with 154 similar cases and thrice failed, but in each instance the case proved to be genuine hip disease." Wonderful Rabey! poor Lorenz!!

Medical News.

ARKANSAS.

No Collusion Allowed.—The Government Medical Board at Hot Springs has authoritatively stated that any registered physician found to be assisting unregistered practitioners, by writing bathing directions or in any other way, will be rigidly dealt with.

Officers Elected.—At the annual meeting of the Pulaski County Medical Society, held at Little Rock, November 2, the following officers were elected: President, Dr. Strodder U. King; vice-president, Dr. John H. Kinsworth; secretary, Dr. Charles C. Stephenson, and treasurer and librarian, Dr. William C. Dunnaway, all of Little Rock.

Dr. Drennen Vindicated.—Immediately on the return of Dr. C. Travis Drennen from the East he demanded trial in the Circuit Court on the indictments recently returned against him by the grand jury, charging unprofessional conduct. The case was promptly dismissed by the court at the request of the prosecuting attorney on the ground that there was absolutely nothing in the testimony of the prosecuting witness which would warrant a conviction. The evidence was to be the same as that in the case of Dr. Thomas E. Holland, which was tried by jury a few days before, in which the judge instructed the jury to return a verdict of not guilty without leaving the jury box. These two gentlemen were indicted on the unsupported testimony of a man, confessedly in the nefarious business which they have been actively seeking to suppress. Hot Springs physicians are accordingly congratulating themselves on this signal victory over the "doctor-drummers," and on the complete exoneration of those who have been endeavoring to remove this reproach from the town.

CONNECTICUT.

Personal.—Dr. Charles S. Stern, Hartford, has sailed for Europe.——Dr. Charles W. Holbrook, health officer of East Haven, has resigned.——Dr. Henry Fleischner, attending physician at New Haven Dispensary for quarter of a century, has resigned.

Anti-Tuberculosis Lectures in Schools.—The members of the New Haven Medical Association and the superintendent of the public schools have arranged to give a series of lectures on tuberculosis, its cause and prevention. The first lecture will be given late in this month or early in December.

Eddyite Not Appointed Guardian.—Judge Cleveland of New Haven recently refused to appoint an Eddyite as guardian to the nine-year-old daughter of Isaac W. Stiles of New Haven. The judge made this decision after asking some questions as to prospective conduct in case of the serious sickness of the child.

October Mortality.—During October, 1,123 deaths occurred in the state, an annual death rate of 14.8 per 1,000. The deaths numbered 37 less than in September, and 10 less than in the same month of 1902, but 14 more than the average number of deaths in October for five preceding years. Infectious diseases, including diarrhea, caused 43.9 per cent. of the total mortality.

Infectious Diseases in October.—Smallpox—Putnam reports 8 cases; measles—255 cases are reported from 20 towns; scarlet fever—103 cases are reported from 32 towns; diphtheria—141 cases are reported from 36 towns; whooping cough—94 cases are reported from 13 towns; typhoid fever—168 cases are reported from 38 towns, and only 25 cases of consumption are reported during the month from 11 towns.

Dispensary Election.—At the annual meeting of the New Haven Dispensary, Dr. Charles A. Lindsley was elected president; Dr. John S. Ely, secretary; Drs. Francis Bacon, Charles A. Lindsley, Oliver T. Osborne, Louis S. De Forest, Charles J. Foote and Henry Fleischner, consulting physicians; Drs. William H. Carmalt, Henry L. Swain, Arthur L. Alling, John S. Ely, Robert E. Peck, Louis B. Bishop, Otto G. Ramsay, William Springer and Ralph A. McDonnell, attending physicians, and Dr. Thomas H. Young, apothecary.

ILLINOIS.

Infectious Diseases.—Diphtheria is said to be epidemic near Platteville, in Kendall County.——Typhoid is epidemic in Canton, where at least 60 cases exist.——In Streator there are said to be 6 or 8 cases of smallpox.——Dr. E. S. Baker of the State Board of Health has gone to Tuscola, Camargo, Pinkstaff and Mt. Carmel to inspect the sanitary arrangements with special reference to the reported cases of smallpox.——The smallpox situation in Belleville is encouraging. It is believed to be under control, and about 250 individuals are being vaccinated each day.

Chicago.

Fire in Dissecting Room.—A fire in the anatomic department of the building of the Northwestern University dental department, November 20, damaged the building to the extent of $35,000.

Dr. Musser at the Chicago Medical Society.—Dr. John H. Musser, President-elect of the American Medical Association, who was in Chicago at the conference of the officers of the sections of the American Medical Association, read a paper in the evening before the Chicago Medical Society, after which he was tendered a reception.

Personal.—Dr. E. H. Ruediger of the Memorial Institute for Infectious Diseases, Chicago, has been appointed assistant in the Serum Institute, Manila, P. I.——Dr. Albert C. Hemmett was thrown from his buggy and seriously injured in a collision with an electric car, November 8.——Dr. Chas. O. Young has severed his connection with Augustana Hospital.

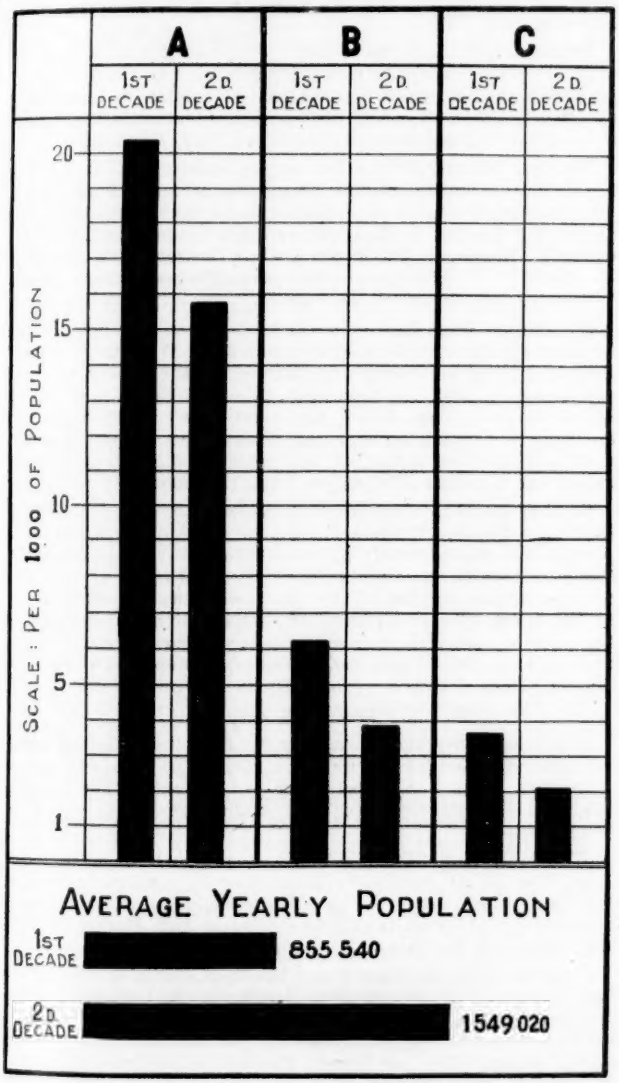
Examination for Assistant Warden.—Fourteen applicants took the examination for assistant warden of Cook County Hospital, and of these four were successful. Dr. John B. Colwell obtained the highest mark and received the appointment. The other three on the eligible list in order of excellence are Drs. Arthur W. McClave, Victor Lespinasse, Chicago, and Joseph M. Kearney, Elgin.

Probert Fined.—The notorious Arthur C. Probert, vice-president of the "Christian Hospital," who was arrested on complaint of Dr. John B. Murphy and others on the ground that

their names were being used without authority on certificates of the hospital to induce other physicians to become members of the staff on payment of fees of varying amount, was fined $500 and costs, November 21, for fraudulent use of the mails.

Reduced Mortality.—Excepting pneumonia, all the acute infectious diseases show marked reductions in the mortality returns for the week ended November 21. Deaths from diphtheria are fewer than in any week since the schools opened. The number of cases reported is 30 per cent. less than in the previous week and the scarlet fever cases 26 per cent. less. No new cases of smallpox were discovered during the week. The total deaths for the week were 467, an annual death rate of 12.91 per 1,000. Pneumonia still heads the list, with 70 deaths, and then follow heart disease, with 63, and consumption, with 45.

Chicago Mortality for Twenty Years.—Dr. Arthur A. Reynolds, health commissioner, in a recent talk before the Sociology Club on "Sanitary Conditions in Chicago," briefly



rehearsed the sanitary, or rather unsanitary, conditions as they existed 65 years ago and compared them with the conditions of the present day. He presented a chart, which is herewith reproduced, which shows graphically the death rates during two decades—the first from 1883 to 1892, and the second from 1893 to 1902. The chart is explained as follows:

A—The death rate at all ages: In the first decade it was 20.35 per 1,000 of population. In the second decade it was 15.77—a decrease of 22.5 per cent. At the earlier rate—20.35 per 1,000 of population—there would have been 315,225 deaths during the last ten years, or 70,867 more than actually occurred.

B—The death rate of infants under 1 year of age: First decade this was 6.15 per 1,000 of total population; in the second decade it was 3.93—an increase of 36.1 per cent. or an equivalent of 34,270 fewer infant deaths in the last ten years.

C—The death rate of young children, between 1 and 5 years of age: It was 3.58 per 1,000 of total population in the first decade; it was 2.06 in the second—a decrease of 42.4 per cent., or 23,537 fewer children's deaths since 1892.

The "Average Yearly Population" of the last decade was 81 per cent. greater than that of the first—855,541 in the first; 1,549,019 in the last.

These figures are due in part to the bettered milk supply, antitoxin treatment of diphtheria, prophylaxis of tuberculosis and the educational propaganda of the Chicago Board of Health.

MARYLAND.

The Baltimore County Medical Association met November 19 at Halstead's, Park Avenue Heights. "State Organization of the Medical Profession" was discussed by Drs. S. T. Earle, J. M. B. Rowland, William J. Todd, G. Milton Linthicum and Joseph Gichner.

Baltimore Personals.—Dr. H. Barton Jacobs has returned from Newport.——Dr. William Osler has been elected president of the new Sydenham Society of London.——Drs. W. Ruice and B. W. Briscoe, resident physicians at Bayview Hospital, have accepted positions in West Virginia and western Maryland.——Dr. Howard A. Kelly will spend his holidays in Florida, as the guest of the chief of the Seminole Indians.

MASSACHUSETTS.

Bequest.—By the will of Elizabeth A. Whitney the New England Baptist Hospital benefits to the extent of $5,000.

Insane Hospital Regulations.—At a meeting of the Massachusetts State Board of Insanity, November 17, the matters of employing female nurses for insane men and of permitting families of married employes to live in the institutions were both favored, provided the expense did not prove too great.

Compulsory Vaccination Held Legal.—The Supreme Court of Massachusetts has declared that the law governing compulsory vaccination is constitutional and confirmed the sentence of the Municipal and Superior courts against a man named Mugford, who refused to be vaccinated or to allow his child to be vaccinated.

Hospital Dedicated.—Mt. Sinai Hospital, the new institution supported by Boston Jews, located at 17 Stamford Street, was dedicated November 22. It is a large four-story building, which has been remodeled to accommodate the out-patient department formerly located on Chambers Street. There are both medical and surgical wards with rooms for house physicians, matron and nurses.

Newburyport Hospital.—The new hospital at Newburyport, to be known as the Anna Jaques Hospital, is nearly completed. It comprises a group of buildings which include an administration building, two large wards, laundry and boiler house, all of which are practically finished. Plans are ready and contracts let for the operating building, which will be of concrete, two stories, and 40 by 75 feet.

Typhoid at Williams.—The eight or ten cases of typhoid fever occurring among Williams College students have led to a careful examination of the conditions by a board of experts called by President Hopkins. They report inability to find any evidence of any local source of infection and believe the cases are all imported. The prompt action of the college authorities meets the commendation of all.

MICHIGAN.

Swindle Milford Physicians.—The well-worn collection agency frauds are abroad in Michigan and have secured the usual number of victims, who have signed contracts without first examining them closely to see what they contained. These swindlers have recently victimized three or four physicians in Milford.

Consumption Sure-Cure Factories Shut Down.—Several patent medicine companies in Kalamazoo which have manufactured and exploited alleged cures for consumption have recently discontinued business, the reason given for the closure being pressure said to have been brought to bear by the United States government, for fraudulent use of the mails.

Medical College Under Ban.—At the October meeting of the State Board of Examiners in Medicine and Surgery, the Michigan College of Medicine and Surgery, Detroit, was taken from the list of accepted schools, the reason given by Dr. Oscar LeSeure, the local member of the board, being that it did not come up to the requirements demanded of such an institution, and was lacking in general equipment. The college authorities claim that this decision is due to a misunderstanding.

Comparative Morbidity.—For October, compared with the average for October in the last ten years, scarlet fever was

more than usually prevalent; and influenza, dysentery, intermittent fever, cholera infantum, remittent fever, erysipelas, whooping cough and measles were less than usually prevalent. For October, compared with the preceding month, neuralgia, influenza, scarlet fever, pneumonia, diphtheria and measles were more prevalent; and diarrhea, dysentery, cholera morbus, pleuritis, inflammation of bowels, cholera infantum, whooping cough and smallpox were less prevalent.

Communicable Diseases.—Meningitis was reported present in Michigan during the month of October, 1903, at 8 places; whooping cough at 19 places; measles at 21 places; smallpox at 42 places; diphtheria at 83 places; scarlet fever at 111 places; typhoid fever at 185 places and consumption at 242 places. Meningitis was reported at the same number of places; whooping cough at 13 places less; measles at 3 places less; smallpox at 15 places less; diphtheria at 10 places more; scarlet fever at 8 places more; typhoid fever at 3 places more, and consumption at 9 places more, when compared with the preceding month.

Lecture on Tropical Medicine.—Major Frank S. Bourns, M.D., formerly health officer of Manila, gave a lecture to the fourth-year medical students at the University of Michigan November 12. Dr. Bourns detailed the more important tropical diseases encountered in the Philippines, including dysentery, cholera, leprosy, plague, malaria and beri-beri; described the measures that have been carried out to check the various diseases, explained some of the unusual difficulties in preventive medicine among a partly civilized, superstitious and fatalistic population, and mentioned the lines along which further work in medicine would be likely to be carried out.

October Michigan Mortality.—There were 2,624 deaths reported to the Department of State for October, or 98 less than the number returned for the preceding month. The death rate was 12.5 per 1,000. There was a considerable decrease in deaths of infants and children, and a slight increase in deaths of elderly persons as compared with September. Important causes of death were as follows: Tuberculosis, 225; typhoid fever, 90; diphtheria, 78; scarlet fever, 7; measles, 3; whooping cough, 16; pneumonia, 143; diarrhea and enteritis, under 2 years, 173; cancer, 129; accidents and violence, 202. There was 1 death from smallpox. Somewhat increased mortality was shown from tuberculosis, diphtheria and croup and pneumonia. Typhoid fever caused 90 deaths as compared with 74 during the preceding month. There was a very large decrease in deaths reported from diarrheal diseases of children and also a considerable diminution in the number of deaths from cancer.

MISSOURI.

Smallpox.—Milan is reported to have a number of cases of smallpox and one death has occurred.

St. Louis College News.—Barnes Medical College has added a dental and a pharmaceutical department and is now on a university basis. It has opened with an increased number of students and has no university affiliation.

In Memory of Pollak.—The St. Louis Medical Society of Missouri, at its meeting, November 14, adopted memorial resolutions, setting forth the sense of the society's loss in the death of Dr. Simon Pollak, its "oldest and most illustrious member."

St. Joseph Personals.—Dr. J. J. Bentley has been re-elected superintendent of the Ensworth Hospital.——Dr. Frank O. Reynolds has been adjudged insane and has been taken to the State Hospital for the Insane, No. 2. His condition is said to be due to the use of cocain and morphin.

NEW YORK.

Smallpox Bills Audited.—The town board of Perry has audited bills aggregating nearly $3,000 as a direct result of the smallpox epidemic of last fall.

Consumptive Hospital Will Soon Open.—Advices from the state capitol indicate that the State Consumptive Hospital in the Adirondacks will be so far finished by the early spring as to accommodate fifty patients and by the summer the complete institution will be ready.

Personal.—Dr. Reed B. Bontecou, Troy, was tendered a reception on November 18 by the Rensselaer County Medical Association, of which he is one of the oldest members.——Dr. Chauncey P. Smith has been appointed medical officer of the Lackawanna Steel Company at West Seneca.——Dr. Thomas G. Nock has been elected mayor of Rome.

Smallpox in Medina.—There is an epidemic of smallpox in Medina. There have been 92 cases since October 1, and now 37 houses are quarantined in which are 47 persons stricken with the disease. All the cases thus far reported are of a mild form. A strong anti-vaccination sentiment exists in the town, which is responsible for the spread of the disease. The state health department has warned all the surrounding territory to quarantine against Medina.

Diphtheria.—The disease is epidemic in the village of Suffern, Rockland County, where 21 cases have already been reported. The board of education has ordered that the schools be closed.——Two public schools in Auburn have been closed indefinitely on account of the prevalence of the disease in the northwestern part of that city, where 30 cases are said to exist.—An epidemic of diphtheria exists at the Elmira Reformatory and a number of deaths are reported. The disease must have been brought there by some prisoner, as no cases have been discovered in the city outside of the prison.

Buffalo.

Midwives Fined.—Two Polish midwives were each recently fined $25 and costs in the Municipal Court for practicing without a license.

Personal.—Dr. and Mrs. John V. Woodruff are in the Bermudas.——Dr. Lawrence Hendee, a graduate of the University of Buffalo, and for several years past an instructor in anatomy at Cornell University, has been appointed volunteer assistant in surgery at the University of Königsberg, Germany.

Hospital Alumni Meet.—The annual meeting and banquet of the General Hospital Alumni Association was held November 7, when a committee was appointed to draw up resolutions on the death of Cornelius C. Wyckoff, and the following officers were elected: President, Dr. Peter F. Van Peyma; vice-president, Dr. Charles G. Stockton; and secretary and treasurer, Dr. William I. Thornton, all of Buffalo.

Dr. Marcy Wins Suit.—In the suit for alleged malpractice brought by Fred B. Lamphere against Dr. William H. Marcy, Buffalo, in which $10,000 was claimed on the ground that the defendant declared the child dead, although the child was alive and lived for several hours, the court decided that there was no cause for action because the possibilities of life in a prematurely born child of that age were so slight that it eliminated the question of damages from the case.

October Deaths.—The monthly report of the department of health for October shows a death rate of 13.16 per 1,000. The principal causes of death were as follows: Consumption, 28; cholera infantum, 4; diphtheria, 10; typhoid fever, 12; debility, 42; alcoholism, 2; cancer, 11; apoplexy, 23; valvular disease of the heart, 37; pneumonia, 16; appendicitis, 4; cirrhosis of the liver, 6; enteritis, 11; diabetes, 6; nephritis, 20; abortion and violence, 36. Total deaths, 442, as compared to 393 for October, 1902.

New York City.

New Dispensary and Dormitory for Bellevue.—The old building formerly used as the Bellevue Medical College was opened November 17 as a dispensary for out-patients. The building has been entirely renovated and made fireproof at a cost of $53,000.

Would Destroy "Lung Block."—A public hearing was held November 13, at which the destruction of what is known as the "lung block"—because of the prevalence of consumption—bounded by Houston, Catherine, Cherry and Market streets, was urged by the board of estimate.

Personal.—Dr. M. Allen Starr has been elected a corresponding member of the Neurological Society of the United Kingdom, London, in recognition of his contributions to the study of nervous diseases.——Dr. Frederick W. Chapin, who was recently removed to the Insane Pavilion of Bellevue Hospital, is reported as improving.

PENNSYLVANIA.

New Hospital for Pittsburg.—A contract for the Eye, Ear and Throat Hospital for Pittsburg has been awarded. The building will be three stories in height and will cost about $75,000.

Addition to State Hospital.—Directors of the Lackawanna State Hospital, Scranton, have decided to make a four-story addition to the hospital building, which will be of brick, and fireproof, and will cost about $100,000.

Contagious Diseases in Pittsburg.—Pittsburg is suffering from typhoid fever, scarlet fever, diphtheria and smallpox. During the week ended November 14, the physicians of the bureau of health vaccinated about 16,000 individuals.

Dr. Ridenour Acquitted.—Dr. Samuel H. Ridenour, Pittsburg, who was charged with selling cocain without a prescription, was found not guilty. The defendant admitted that he had sold the drug and pleaded ignorance of the law restricting its sale.

Smallpox.—Two new cases have developed at Jeannette.——In Pleasant Valley, 13 cases are said to exist, and one patient has died.——Alliance has an epidemic of the disease and the health boards of Allentown and Catasauqua have adopted a resolution requesting the electric and steam railways to discontinue selling tickets to Cementon, Sigfried and Northampton until all danger of infection is passed.

Advisory Medical Board for Penitentiary.—Drs. William D. Robinson and Charles D. Hart, inspectors of the Eastern State Penitentiary, who were appointed a special committee to obtain the voluntary services of an advisory board of physicians and surgeons, have been successful in their endeavors. The members of the advisory board are: Dr. Robert G. LeConte, surgery; Dr. Judson Daland, medicine; Dr. George E. de Schweinitz, ophthalmology; Dr. Francis A. Packard, laryngology, rhinology and otology, and Dr. Horace Philips, neurology, all of Philadelphia.

Philadelphia.

Personal.—Dr. Alfred Heineberg has been appointed assistant demonstrator of gynecology in Jefferson Medical College.——The University of Toronto has conferred on Dr. W. W. Keen the degree of LL.D.

Woman's College Hospital.—The Woman's Medical College contemplates building a hospital and has issued a circular asking the alumnæ to subscribe to the project. About $75,000 is needed for the building and $425,000 for endowment. Friends of the institution will also be asked for aid.

Hospital Site Purchased.—The Mount Sinai Hospital Association, which was organized three years ago, and which has since maintained a large dispensary in the slum district, has recently purchased at a cost of $35,000 a site for a hospital. The project is supported by several benevolent and wealthy Jews of the city.

Weir Mitchell Guest of Honor.—At the regular meeting of the Medical Club of Philadelphia, November 20, which was of the nature of a smoker held four times a year at the Hotel Bellevue, Dr. S. Weir Mitchell was the guest of honor. Preceding the meeting the president, Dr. Edward E. Montgomery, entertained Dr. Mitchell and a few professional friends at dinner.

The Smoke Nuisance.—A subcommittee of the city councils has approved an ordinance to abate the soft coal smoke nuisance. This also provides that no sulphurous fumes or noxious odors shall be permitted to escape from any chimney or smokestack within the city limits. A penalty of $50 is fixed for each violation. Locomotives and steamships are exempted. The question of legality is to be determined by smoked glass of such a degree of darkness that any smoke visible through the glass is of illegal darkness in color.

The Contagious Disease Situation.—Of the 373 new cases of contagious diseases reported for the week ended November 21 34 per cent. were from wards surrounding the Municipal Hospital. The latter condition is due, Director Martin thinks, to a "leak" in the Municipal Hospital. The new cases of smallpox numbered 68, double as many as for the week before. Dr. Martin has no reason to think, he says, that smallpox will become epidemic. The chief reason assigned for its continuance is the fact that victims ignorantly or intentionally fail to call in a physician and therefore keep the health authorities from learning of the cases. Many of the recent cases have occurred among a religious sect of negroes who depend on prayer and incantations and resist medical treatment. The founder and head of the church is said to have fled the city to escape arrest. Some of the leaders are in quarantine and will probably be tried for practicing medicine without license. The health authorities, with a detail of police, recently made a raid on some four hundred of the congregated sect and forcibly vaccinated all who were not properly protected by vaccination.

GENERAL.

Tuberculosis Sanitarium on Isle of Pines.—The climate of the Isle of Pines, West Indies, is said to be as well fitted for the residence of consumptives as is that of Colorado and a tuberculosis sanitarium is projected.

The Phipps Institute Lectures.—The next lecture in this course will be given in Philadelphia, Thursday, December 3, by Dr. William Osler, Baltimore, the subject being "The Home and Its Relation to the Tuberculosis Problem." These lectures are semi-popular in character and all are invited to attend them.

Manila Medical Society.—At a recent monthly meeting of this society, Major J. M. Banister of the First Reserve Hospital read a very interesting paper on "The Treatment of Strangulated Hernia." Dr. R. P. Strong exhibited a collection of intestinal parasites. Capt. Edward L. Munson, acting commissioner of public health, read a paper on "The Movement of the Bubonic Plague in the Philippines." There was a good attendance and discussion was lively. The society is reported to be growing.

Conference of Section Officers.—A conference of the officers of the sections of the American Medical Association was held at Chicago, November 18, in response to an invitation sent out by the President-elect, John H. Musser. The various sections were represented as follows: Practice of Medicine, Alexander Lambert, New York; J. L. Miller, Chicago, and George Dock, Ann Arbor, Mich. Obstetrics and Diseases of Women, L. H. Dunning, Indianapolis; C. L. Bonifield, Cincinnati, and Henry P. Newman, Chicago. Surgery and Anatomy, E. Wyllys Andrews, Chicago; A. J. Ochsner, Chicago, and W. J. Mayo, Rochester, Minn. Hygiene and Sanitary Science, Arthur R. Reynolds, Chicago, and H. M. Bracken, Minneapolis. Ophthalmology, Albert E. Bulson, Jr., Ft. Wayne, Ind., and Frank Allport, Chicago. Diseases of Children, Charles G. Kerley, New York; C. F. Wahrer, Ft. Madison, Iowa, and John C. Cook, Chicago. Stomatology, Eugene S. Talbot, Chicago. Nervous and Mental Diseases, F. Savary Pearce, Philadelphia; David I. Wolfstein, Cincinnati, and Hugh T. Patrick, Chicago. Cutaneous Medicine and Surgery, Henry G. Anthony, Chicago, and R. R. Campbell, Chicago. Laryngology and Otology, J. F. Barnhill, Indianapolis, and Otto T. Freer, Chicago. Materia Medica, Pharmacy and Therapeutics, C. S. N. Hallberg, Chicago, and N. S. Davis, Jr., Chicago. Pathology and Physiology, L. Hektoen, Chicago, and Frank B. Wynn, Indianapolis. There were present also: J. H. Musser, President-elect, Philadelphia; George F. Jenkins, Fourth Vice-President, Keokuk, Iowa; M. L. Harris, Resident Trustee, Chicago, and George H. Simmons, Secretary, Chicago. A continuous day's session was held, and in the evening a dinner was tendered by the resident section officers to the visitors. Matters of special importance to the sections were discussed, such as places of holding section meetings, modes of election of officers, need of more or less permanency in the office of section secretary, need of collaboration in section work to the end that any given subject may be discussed in one section only, the advisability of the smaller sections having a shorter program and hold only half-day sessions each day, giving their members a chance to attend other sections, etc. It is believed that the conference was of great value and will result in much good and will make the section sessions of more practical value to all than has been the case in the past.

CANADA.

The New Hospital Opened at Moncton, N. B.—Moncton's new hospital building was formally opened November 11. The building is a modern one, and cost $20,000.

Personal.—Dr. Herald has resigned as secretary-treasurer of the faculty of Queen's University, Kingston, and Dr. W. T. Connell has been appointed to the vacancy; Dr. A. R. B. Williamson has been appointed lecturer on medical jurisprudence and toxicology.——Dr. Von Eberts, registrar of the faculty of medicine of McGill University, has resigned and will resume private practice.——Dr. D. A. Shirres, Montreal, who has been studying in Europe, has been appointed neurologist to the Montreal General Hospital.

Smallpox and Diphtheria in Ontario.—Dr. Hodgetts, provincial medical health inspector for Ontario, has been examining into the smallpox outbreak in Tweed, Hastings County, Ont., and reports that there have been 29 cases in 8 houses.——Dr. Bryce, secretary of the Ontario Board of Health, has reported that in August last 27 municipalities reported 122 cases of diphtheria, with 24 deaths; in September 38 municipalities reported 240 cases, with 30 deaths; in October 52 municipalities reported 464 cases, with 54 deaths, and returns so far for the month of November indicate that the disease is still spreading. In the City of Toronto alone in August there were 51 cases reported; in October the number had grown to 118 with 14 deaths. Out of 770 cases 445 have been treated in isolation hospitals.

Toronto University Seeks Better Hospital Facilities.—The medical faculty of the University of Toronto and the board of

trustees of the principal hospitals are at present negotiating with a view to arranging for accommodation and regulations to secure better hospital facilities for medical education. The committee appointed for the purpose from the university requires that the house staff of these hospitals be large enough to efficiently carry on the work, that one member of each staff be detailed to do clinical laboratory work exclusively, that the staffs be divided into seniors and juniors, the seniors to retire every six months, that no fees be paid any members of the house staff by physicians or patients and that each hospital board appoint an official anesthetist. With a view to increasing the material for clinics the committee urges that all patients in public wards be placed in charge of the clinical staff. They also require better facilities for the conduct of out-patient departments. Better facilities for the study of pathology were asked by the committee, increasing the number of autopsies and the keeping of proper records. In the Children's Hospital at Toronto, all these regulations have been in force for considerable time.

FOREIGN.

The Austrian Trouble.—Our Vienna exchanges state that the recent discussions in the Landtag on the subject of vivisection, with the insults to the medical profession mentioned in this column last week, are to be published in a separate pamphlet for distribution among the public. The resolution to publish the pamphlet was passed by the majority of the house. Our exchanges refer to this proceeding as presenting only too true a picture of the condition of ignorance and hostility to science prevailing throughout the masses in Austria at the opening of the twentieth century. The resolution adopted by the Vienna Medical Chamber calling on the members of the national board of health to resign, has not been complied with by the latter.

Quincke's Silver Jubilee.—October 29 was the twenty-fifth anniversary of the day on which Prof. H. Quincke assumed charge of the medical clinic at Kiel. He was previously at Berne, and was summoned to Kiel as the successor of Professor Bartels. His former assistants gathered from far and near to do him homage on his jubilee, and the attendance at the banquet was limited to those who had served as his aids at any time. The next day he invited them all to lunch at his home, and the festivities closed with a torchlight procession in his honor arranged by the students. The list of his assistants includes such names as Bertheau, Kirchhoff, Brockendahl, Hoppe-Seyler, von Starck and Glaevecke. Quincke is now in his sixty-first year.

LONDON LETTER.

Malaria: The Anti-Mosquito Campaign.

Reports from all parts of the British Empire show that the anti-mosquito campaign is being carried on with the most gratifying success. At the opening meeting of the Royal Colonial Institute Major Ronald Ross pointed out that in the once deadly colony of Lagos, thanks to the zeal of Sir W. MacGregor, the governor who is a doctor, malaria has lost its terrors. The difficulties to be contended with were great, for Lagos itself is built on a low and swampy territory, and surrounded by dense forests. In the medical report of Hong Kong for 1902 the deaths of the Chinese from malarial fever are stated to have been 887 in 1900, 541 in 1901, and 303 in 1902. But perhaps the most striking and rapid results have been obtained at Ismailia on the Suez Canal. In a little over 6 months one class of mosquito was practically banished from the town and coincidently the amount of malarial fever diminished. In the first 6 months of the present year there were only 3 cases in hospital against 52 for the same period of last year.

The King's Sanatorium.

The king has laid the foundation stone of the sanatorium for the treatment of consumption which is being built in Surrey. The cost is defrayed by the munificence of a private donor [Sir Ernest Cassel, according to press dispatches.—ED.] who wished to remain anonymous, and placed a large sum at the disposal of the king for the purpose. Sir W. Broadbent, Sir F. Treves, Sir H. Weber, and other members of the committee were present at the ceremony. The sanatorium will be replete with every convenience and invention, and will be one of the most perfect ever erected. It will be a long two-story building overlooking the Valley of the Rother to the South Downs. There will be accommodation for 100 poor and 12 well-to-do patients. Each patient will have a separate room, and there will be a balcony on which the patients can sit out and on which the beds can be wheeled. The site is ideal; there are sandy soil, southern aspect and pine woods, which protect against north and northeast breezes. The ground slopes gently to the south and is well wooded, the western border consisting of open moorland ending in a ravine. The climate is rendered mild and equable by proximity to the sea and shelter from the hills. The primary object is to provide accommodation for a class above the very poor (who are already provided for) such as teachers, governesses, clerks, shop assistants, etc.

Typhoid Fever in Glasgow Due to Contaminated Shellfish.

An outbreak of typhoid fever in London due to shellfish contaminated with sewage was recently described in THE JOURNAL. A similar outbreak has just occurred in Glasgow. The health officer has reported 18 cases, all giving the same history. The patients had been on a holiday at the same coast town at the probable time of infection and consumed uncooked shellfish (cockles or mussels). In addition 8 cases occurred in one family who had not visited the town in question but had eaten shellfish brought from it. The dates of sickening seemed to show that the mother of the family had contracted the fever from the shellfish and that the other members were infected through her. The shellfish were gathered by the visitors from an area of foreshore polluted by the sewage of the town. Bacteriologic examination of the shellfish showed evidence of fecal pollution in almost every specimen—the presence of the *Bacillus coli*. On the other hand, shellfish obtained at a distance of 1½ to 2 miles from the sewer outfall were entirely free from the bacillus. Only in the third series of specimens examined was any trace of an organism resembling the typhoid bacillus found and there it was very abundant. This bacillus was obtained in great numbers and almost in pure culture in one plate. The shellfish which yielded this was a cockle found on the surface about 200 yards from the sewer outfall. Surface cockles are regarded by cockle gatherers as sick and are avoided, but it is just these the inexperienced would pick up. The bacillus had all the microscopic and cultural characters of the typhoid bacillus and it gave the Widal reaction.

Correspondence.

One of the Causes of the Chaos in Posology.

NEW YORK, Nov. 21, 1903.

To the Editor:—In my communication, "Dose of Carbolic Acid and Dosage in General," which appeared in THE JOURNAL, November 21, I said that our so-called science of posology is in an uncertain, chaotic condition. There are many intrinsic reasons for this chaos and uncertainty, but I wish to call attention to one cause, which contributes toward that chaos, sows confusion in the physician's mind and not infrequently throws him off the track. Two or three days ago the question of dosage came up. A medical friend, a recent graduate, said that the dose of belladonna as given in the books is entirely too small. He has a child under treatment suffering with pertussis; he has been trying to put it under the influence of belladonna. He started with one-drop doses of the fluid extract, but as they had no effect, he began gradually to increase the dose, until now he is giving 8 drops three or four times a day. "And even under these doses the physiologic effect is very slight. There is hardly any dilatation of the pupils, flushing of the face or dryness of the throat," etc. Though I am rather used to large doses, this statement surprised me. I am familiar enough with belladonna to know that 8 drops of the fluid extract is a heroic dose for a child 8 or 9 years old. I suggested that the fluid extract must have been old and ineffective, or otherwise the child must possess a peculiar immunity toward belladonna. An examination at the drug store of the bottle of the fl. ext. belladonna showed a sediment at the bottom, and the appearance of the bottle indicated that it must have been on the druggist's shelves for a long time. An original bottle of the fluid extract of belladonna was obtained from a prominent manufacturer, and one drop of that produced a decided and unmistakable physiologic belladonna effect. I shudder to think what the result might have been if this physician, misled by his experience, had ordered for a child 8 drops of an efficient fluid extract of belladonna several times a day. The above is, I am sure, not a solitary

case. We very frequently deal with different galenical preparations of the same drugs, one of which may be twenty times stronger than another.

The above incident teaches us two important lessons: 1. In prescribing galenicals we should make sure that they are comparatively fresh and come from high-class manufacturers. 2. In the cases of drugs which contain active principles fully representing the virtues of the drugs, those active principles are by far preferable to the crude drug or to its galenic preparations. Atropin is always atropin, but belladonna is not always belladonna, and the same may be said of dozens of other important drugs.

WILLIAM J. ROBINSON, M.D.
119 East 128th Street.

Interchange of Licenses.

NEWARK, N. J., Nov. 20, 1903.

To the Editor:—At the meeting of the National Board of Dental Examiners, held at Nashville, N. C., last August, the following resolution was unanimously adopted after full discussion:

Resolved, That an interchange of license to practice dentistry be, and is hereby recommended to be, granted by the various state boards, on the following specific conditions:

Any dentist who has been in legal practice for five years or more, and is a reputable dentist of good moral character, and who is desirous of making a change of residence into another state, may apply to the examining board of the state in which he resides, for a new certificate which shall attest to his moral character and professional attainments, and said certificate, if granted, shall be deposited with the examining board of the state in which he proposes to reside, and the said board, in exchange therefor, may grant him a license to practice dentistry.

The above resolution has already been adopted by New Jersey, Ohio and Indiana. Medical men and dentists have been looking for a way to reciprocate in licensing. I think the above resolution comes very near the mark. The party desiring to locate in another state must get a certificate from his own state board first. It is presumed that if he is not all right he will not get such a certificate. The certificate under these conditions is like a letter of introduction. If the applicant is unworthy, his own board will know it, and will not grant the certificate. Such a certificate will be looked on as a kind of "letter of credit," and will not be given unless there is behind it a deposit that can always be drawn on. I think every state board of dental and medical examiners should adopt the principle.

CHAS. S. STOCKTON.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

WINKLEMANN'S OPERATION FOR HYDROCELE.

WASHINGTON, D. C., November, 1903.

To the Editor:—Will you kindly inform me what is Winklemann's operation for hydrocele? G. H. H.

ANSWER.—Winklemann's operation for hydrocele, which was referred to on p. 471 of this volume of THE JOURNAL, was first described in the *Centralblatt für Chirurgie*, Nov. 5, 1898, from which a description was taken, appearing in THE JOURNAL, Jan. 7, 1899. It consists in releasing the fluid through an incision 3 to 4 c.c. in length near the upper pole; then drawing the testis out of the scrotum outward as far as possible until stripped of its serous tunica vaginalis covering which is thus drawn wrong side out. A stitch or two is taken to prevent the testis from slipping back into its sac and the testis and tunica are replaced and skin sutured. Adherences soon form and the operation is asserted to be as effective as the more radical ones. The testis is left a trifle higher than normal and a slight edematous swelling may form for some time, but it is claimed there are no other inconveniences and the patient can be dismissed at once, as there is no danger of hemorrhage. The operation was performed by Winklemann under Schleich anesthesia.

Marriages.

WILDER TILESTON, M.D., Boston, to Miss Clare Williams of Chicago, November 18

GEORGE KRAMER HERZOG, M.D., to Miss Rae Cohn, both of San Francisco, October 7.

JOHN H. OLIVER, M.D., to Miss Nellie Northrop, both of Kewanee, Ill., November 11.

JULIUS ULLMAN, M.D., Buffalo, N. Y., to Miss Eugenia Platky of New York City, October 26.

WILLIAM T. MOFFETT, M.D., to Miss Myrtle M. Crow, both of Blue Mound, Ill., November 17.

CHARLES F. BLAKE, M.D., Baltimore, to Miss Adeline O'Bryon of Washington, D. C., November 10.

WILLIAM D. FERGUSON, M.D., to Miss Claudia Tallulah Irby, both of Laurens, S. C., November 18.

ROBERT E. MASON, M.D., Charlotte, N. C., to Miss Lucile McKie of Woodlawn, S. C., October 27.

JAMES WILLIAM LEWIS, M.D., Bowling Green, Ky., to Miss Susie Talbot of Valdosta, Ga., November 13.

SKOTTOWE BELLINGER FISHBURNE, M.D., to Miss Marion Lee Green, both of Columbia, S. C., November 11.

FRANK CLARENDON COOK, M.D., U. S. Navy, to Miss Eugenia Murdaugh Bain, at Norfolk, Va., November 11.

JOHN FRANCIS CORBIN, M.D., Knoxville, Ill., to Miss Marion Saybrook of Canada, at Knoxville, November 11.

JAMES H. HARGRAVE, M.D., Garysville, Va., to Miss Mary Elizabeth Peters, at Waverly, Va., November 11.

JOSEPH ALBERT CATLIN, M.D., of Church Hill, Md., to Miss M. Claiborne Grasty, at Baltimore, November 10.

WILLIAM M. COPENHAVER, M.D., Bristol, Va., to Miss Emma Charlsie Turner of Chattanooga, Tenn., November 25.

OLIVER WARDLAW LEONARD, M.D. Spartanburg, S. C., to Miss Corinne Louise Jones of Laurens, S. C., November 25.

JESSE HUGHES MABRY, M.D., Newport News, Va., to Miss Elizabeth Boatwright, at Mount Zion Church, Rockingham County, Va., November 10.

Deaths.

Joseph McFadden Gaston, M.D., was born Dec. 27, 1824, in Chester, S. C., the son of Dr. John Brown Gaston. He obtained his earlier education at South Carolina College, Columbia, where he received his A. B. degree in 1843. Immediately after receiving this degree he began reading medicine with his father, attended one course of lectures at the University of Pennsylvania and a second course at the Medical College of the State of South Carolina, Charleston, and received his medical degree from this institution, March 6, 1846. He practiced medicine with his father in the Charlestown District for six years, when he removed to Columbia. At the outbreak of the Civil War Dr. Gaston enlisted in the Columbia Grays and was soon appointed chief surgeon of the South Carolina forces. He was soon promoted to medical director under General Beauregard. He was then made chief surgeon of the third brigade of South Carolina Volunteers, and later participated in the Virginia and Pennsylvania campaigns as chief surgeon of division. Later he was ordered to report to the medical director of hospitals, and was sent to establish a general hospital at Fort Gaines, Ga., then at Fort Valley, where he remained on duty until the close of the war. At the cessation of hostilities Dr. Gaston went to Brazil, where he attended the lecture of the Imperial Academy of Medicine, and he was given the ad eundem degree in 1873. He practiced in Brazil for ten years, and then returned to America, locating in Atlanta. In 1884 he was elected professor of principles and practice of surgery in the Southern Medical College of Atlanta. He was a member of the American Medical Association and chairman of its surgical section in 1891 and 1892; president of the Southern Surgical and Gynecological Association in 1891; president of the American Academy of Medicine in 1895, and vice-president of the American Surgical Association in 1887. During his late years he was made honorary member of the Medical Society of Virginia; of the American Association of Obstetricians and Gynecologists of the Medical Association of Georgia; the Atlanta Society of Medicine and the Southern Surgical and Gynecological Association. Dr. Gaston had been in feeble health for a considerable time, and died at his home in Atlanta, November 15, from acute indigestion, aged 79. He was an authority widely known in this country and Europe in intestinal surgery and a pioneer in the surgical treatment of intestinal diseases. His contributions to literature were chiefly in the line of his specialty; those on yellow fever inoculation and surgery of the gall bladder and ducts are specially notable.

Cornelius C. Wyckoff, M.D. University of Buffalo, 1848, one of the most prominent medical men of western New York; the

only survivor of the original staff of the Buffalo General Hospital; president of the Board of Trustees of the Buffalo Eye and Ear Infirmary; a member of the American Medical Association; a charter member of the New York State Medical Association and sometime president of the Erie County Medical Society and the Buffalo Medical Society; at one time health officer of Buffalo and for many years a member of the board of censors of the New York State Medical Society, died at his home in Buffalo, November 7, from uremia due to kidney disease of long standing, aged 80. A special meeting of the Erie County Medical Society was held November 10, at which action was taken regarding the death of Dr. Wyckoff. The next regular meeting of the Buffalo Academy of Medicine, of which Dr. Wyckoff was a member, will be held in memory of him.

John K. Rainey, M.D. St. Louis Medical College, 1859, surgeon of the 111th Illinois Volunteer Infantry in the Civil War; chief surgeon of the first division, Seventh Army Corps in the Spanish-American War; department commander of the Grand Army of the Republic; surgeon of the Florida East Coast Railway; member of the St. John County Medical Society, and of the Florida Medical Association, died at his home in St. Augustine, November 9.

Robert D. Murray, M.D., surgeon, U. S. P. H. and M.-H. Service, stationed at Key West, Fla., who sustained severe injuries in a runaway accident at Laredo, Texas, November 15, died at that place, November 22. Dr. Murray was an old officer in the service, had been in charge of many stations in the department and, at the time his injuries were received, was engaged in the investigation of the yellow fever epidemic in Laredo.

James A. E. Steeves, M.D. University of Vermont, Burlington, 1884, of St. Johns, N. B., died at Phoenix, Ariz., November 14, from heart disease, aged 42. He was considered a leading authority on nervous diseases in the Province of New Brunswick, and for a number of years was assistant to his father, the late Dr. J. T. Steeves, who was superintendent of the New Brunswick Lunatic Asylum.

J. Frank Moore, M.D. University of New Orleans, 1858, member of the state medical societies of Mississippi and Texas, member of the Smith County (Texas) Medical Society, and of the Board of Medical Examiners for the Seventh District, a surgeon in the Confederate service during the Civil War, died at his home in Tyler, Texas, November 18, from bronchopneumonia.

Samuel S. Lathrop, M.D. College of Physicians and Surgeons, New York, 1900, pathologist to the William Backus Hospital, secretary of the Norwich (Conn.) City Medical Association, member of the New London County Medical Society and the Connecticut Medical Society, was killed by an automobile in Norwich, November 8, aged 39.

Archabale B. Temple, M.D. Western Reserve University, Cleveland, Ohio, 1883, a member of the Kansas State Medical Society, the International Association of Railway Surgeons, and first vice-president of the Southeast Kansas Medical Society, died suddenly in his office in Tulsa, I. T., November 11.

Sylvester J. Finley, M.D. Washington University School of Medicine, Baltimore, 1853, was overcome by paralysis while making a professional call in Lower Chanesford Township, York County, Pa., a few days before, died at his home in Castle Finn, November 12, aged 73.

James M. Mosgrove, M.D. Medical College of Ohio, Cincinnati, 1846, a member of the American Medical Association, a pioneer practitioner, and of late years a banker of Urbana, Ohio, died at his home in that city, from pneumonia, November 9, aged 78.

James Bond Read, M.D. University of Maryland School of Medicine, Baltimore, 1849, formerly of Savannah, Ga., died at his home in Greencove Springs, Fla., from pneumonia, November 10, after an illness of one week, aged 76.

William Ellery Channing Swan, M.D. Harvard University Medical School, Boston, 1865, for forty years a practitioner of Stoughton, Mass., died suddenly at his home in that city, November 10, from heart disease, aged 61.

Arthur E. Chatfield, M.D. Cleveland College of Physicians and Surgeons, Cleveland, 1896, of Cleveland, died at the City Hospital, Cleveland, November 10, from diphtheria, after an illness of three days, aged 43.

William Walker Duffer, M.D. Kentucky School of Medicine, Louisville, 1897, who practiced for some time in Knobel, Ark., died at his home in Louisville, November 10, after a long illness from tuberculosis, aged 40.

Edgar B. Lake, M.D. New York University, 1888, one of the city physicians of Amsterdam, N. Y., died at the Amsterdam Hospital, November 10, from burns received in some unexplained way.

Robert H. Peel, M.D. New Orleans School of Medicine, 1860, of Holly Springs, Miss., died suddenly from heart disease, November 6, while hunting in the Tallahatchie bottom, near Abbeville.

Thomas S. Cook, M.D. Howard University, Washington, D. C., 1894, died at his home in St. Paul, Minn., November 15, from acute gastritis, after an illness of only a few hours, aged 42.

James Zalmon Hunt, M.D. Long Island College Hospital, Brooklyn, N. Y., 1887, died at his home in Lowville, N. Y., November 13, from typhoid fever, after an illness of ten days, aged 42.

Samuel H. Headlee, M.D. Missouri Medical College, St. Louis, 1858, the oldest physician in Phelps County, Mo., died at his home in St. James, November 11, from paralysis, aged 80.

Richard E. Moody, M.D. Eclectic Medical College of Pennsylvania, Philadelphia, 1872, mayor of Sweetwater, Texas, died at his home in that city, November 11, from heart disease.

Stephen Bennett, M.D. Dartmouth Medical College, Hanover, N. H., 1851, for 47 years a practitioner of Lithopolis, Ohio, died at his home in that place, November 15, aged 81.

Lucius B. Baker, M.D. University of Vermont, Burlington, 1872, died at his home in Russell, N. Y., November 2, aged 57.

James Cleveland Bivings, M.D. Medical College of Georgia, Augusta, 1868, died at his home in Dalton, Ga., November 12.

Deaths Abroad.

H. H. Hurdman, M.D., formerly in charge of the mounted police hospital at Dawson, N. W. T., died at his home in Johannesburg, South Africa, August 28, from pneumonia, aged 33.

Charles Marshall, M.D. University of Bishop's College, Montreal, 1879, of Huntingdon, P. Q., a member of the Medical Board of Governors of the Province of Quebec, died suddenly from apoplexy while visiting in New York City, November 13, aged 54.

State Boards of Registration.

COMING EXAMINATIONS.

Board of Medical Examiners of the State of California, City Hall, San Francisco, Dec. 1. Secretary, Geo. G. Gere, M.D., 825 Market St., San Francisco.

State Board of Examiners of Alabama, Montgomery, Dec. 1 to 10. Chairman, W. H. Sanders, M.D., Montgomery.

New Mexico Board of Health, Santa Fe, Dec. 7. Secretary, Dr. D. B. Black, Las Vegas.

Examining Board of Medical Society of Delaware, Dover, Dec. 8. Secretary, Dr. P. W. Tomlinson, Wilmington.

Board of the Homeopathic Medical Society of Delaware State and Peninsula, Wilmington, Dec. 8.

Ohio State Board of Medical Registration and Examination, Columbus, Dec. 8, 9 and 10. Secretary, Dr. Frank Winders, Columbus.

Missouri State Board of Health, Southern Hotel, St. Louis, Dec. 14, 15 and 16. Secretary, Dr. W. F. Morrow, Kansas City.

Medical Council, Philadelphia, Dec. 15. Secretary, Dr. Isaac B. Brown, Harrisburg.

Medical Examining Board of Virginia, Lynchburg, Dec. 15-18. Secretary, Dr. R. S. Martin, Stuart.

Colorado State Board of Medical Examiners, 1723 Tremont St., Denver, Dec. 22, 23 and 24. Secretary, Dr. S. D. Van Meter, Denver.

Arkansas Report.—Dr. J. P. Runyan, secretary of the State Medical Board of the Arkansas Medical Society, sends a report of a recent written examination held at Little Rock. Ten applicants were examined, of whom 8 passed and 2 failed. Two of those who passed and the two who failed were undergraduates. The examination covered seven subjects, 70 questions were asked and a percentage of 60 was required for passing. The colleges of the graduates are given below:

Colleges.	Year Grad.	Per Cent.
Jefferson Medical College	1903	87
Rush Medical College	1877	73
College of Physicians and Surgeons, Chicago	1903	89
Chattanooga Medical College (Tenn.)	1903	80
Harvey Medical College, Chicago	1897	74
University of the South, Sewanee, Tenn	1903	68

Association News.

Place of Session of the American Medical Association for 1905.—Attention is called to the action taken at the last session of the American Medical Association to the effect that any city wishing to invite the Association to meet at that place should present the invitation, together with all available facts concerning hotel accommodations, number and seating capacity of halls available for section meetings, intramural means of transportation, railroad facilities, etc., at least three months before the annual session of the preceding year. In accordance with the above, it is hoped that those cities which desire the Association in 1905 will send their invitations, with all information possible, on or before March 1, 1904.

[Signed] M. L. HARRIS, M.D.,
Chairman Committee on Place of Session and Transportation,
100 State Street, Chicago.

The Senn Prize Essay for 1904.

The Committee on the Senn Medal begs leave to call attention to the following conditions governing the competition for this medal for 1904: A gold medal of suitable design is to be conferred on the member of the American Medical Association who shall present the best essay on some surgical subject. The award will be made under the following conditions: (*a*) The name of the author of each competing essay must be enclosed in a sealed envelope bearing a suitable motto or device, the essay itself bearing the same motto or device. The title of the successful essay and the motto or device is to be read at the session at which the award is made, and the corresponding envelope is to be then and there opened and the name of the successful author announced. (*b*) All successful essays become the property of the Association. (*c*) The medal shall be conferred and honorable mention made of the two other essays considered worthy of this distinction, at a general meeting of the Association. (*d*) The competition is to be confined to those who, at the time of entering the competition, as well as at the time of conferring the medal, shall be members of the American Medical Association. (*e*) The competition for the medal will be closed on, and no essays received after, March 1, 1904. Communications may be addressed to any member of the committee, which consists of the following: Dr. James H. Dunn, Chairman, Minneapolis; Dr. M. L. Harris, 100 State Street, Chicago.; Dr. Floyd McRae, Atlanta, Ga.

The Public Service.

Army Changes.

Changes of station and duties of medical officers of the U. S. Army for the week ending Nov. 21, 1903:

Church, Jas. R., asst.-surgeon, granted fourteen days' leave of absence.

Appel, Aaron H., surgeon, granted thirty days' sick leave of absence.

Shockley, M. A. W., asst.-surgeon, granted thirty days' leave with permission to apply for ten days' extension.

Rand, I. W., asst.-surgeon, left Fort Wright, Wash., on thirty days' leave.

Wilson, Compton, asst.-surgeon, now at San Francisco, is relieved from duty in the Division of the Philippines and will proceed to Fort Howard, Md., for duty.

Schreiner, E. R., asst.-surgeon, relieved from duty at Fort Howard, Md., and will proceed to Fort McHenry, Md., for duty.

Bispham, W. N., asst.-surgeon, relieved at Fort McHenry, Md., to proceed to Fort Logan, Cal., for duty.

Ashburn, Percy M., Usher, F. M. C., Russell, Fredk. F., Wolfe, Edwin P., first lieutenants, ordered to Presidio of San Francisco, Cal., for examination for promotion.

De Shon, Geo. D., Ford, Joseph H., Dean, Elmer A., and Cox, Walter, captains, Steer, Saml. L., Truby, Willard F., Williamson, L. P., Marrow, Chas. E., and Greenleaf, Henry S., first lieutenants, ordered to Army Medical Museum Building, Washington, D. C., for examination for promotion.

Little, Wm. L., asst. surgeon, relieved from further duty in Division of the Philippines, and ordered to Camp George H. Thomas, Ga., for duty.

Halsell, John T., contract surgeon, relieved at Fort McIntosh, Texas and ordered to Eagle Pass, Texas, to relieve contract surgeon Victor E. Watkins, U. S. Army, who is ordered to San Francisco, Cal., to sail December 1 for Philippine service.

Trenholtz, Clarence A., contract surgeon, relieved at Fort Apache, Ariz., and ordered to duty at the General Hospital, Fort Bayard, New Mexico.

Hepburn, James H., contract surgeon, granted twenty days' leave of absence from Fort Douglas, Utah.

Newlove, George, contract surgeon, relieved from duty at Fort Wood, New York, and ordered to Fort Ethan Allen, Vt., to accompany troops of the 2d Cavalry to Philippine service on the *Kilpatrick*, sailing from New York about December 15.

Cooke, Robert P., contract surgeon, returned from temporary duty at Fort Screven, Ga., to his proper station, Camp George H. Thomas, Ga., and is now under orders for change of station to Fort Wood, New York.

Arwine, James T., contract surgeon, granted a month's leave of absence about November 20 from the Presidio of San Francisco.

Unger, Isedor M., contract surgeon, granted three months' leave of absence from the Division of the Philippines, with permission to visit the United States.

Navy Changes.

Changes in the Medical Corps of the Navy, week ending November 21:

Freeman, G. F., P. A. surgeon, detached from the Naval Hospital, Chelsea, Mass., and ordered to the Naval Station, Guam.

Brownell, C. D., surgeon, detached from the *Alliance* and ordered home to await orders.

Fiske, C. N., P. A. surgeon, ordered to the Naval Hospital, Boston, Mass.

Angeny, G. L., P. A. surgeon, detached from the *Essex* and ordered to the Naval Home.

Dickson, S. H., medical inspector, ordered to the *Kearsarge* as fleet surgeon of the North Atlantic Station.

McClurg, W. A., medical inspector, detached from the *Kearsarge*, and ordered home to wait orders.

Gill, J. E., asst.-surgeon, ordered to the Naval Museum of Hygiene and Medical School, Washington, D. C.

Marine-Hospital Service.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Nov. 19, 1903:

Williams, L. L., asst.-surgeon-general, to proceed to New York, N. Y., for special temporary duty and as inspector of the Purveying Depot.

Carmichael, D. A., surgeon, bureau letter of October 5 granting Surgeon Carmichael leave of absence for thirty days from October 16, amended so as to read twenty-four days from October 16.

Wasdin, Eugene, surgeon, granted leave of absence for one month from December 7.

Magruder, G. M., surgeon, granted leave of absence for two days from November 17.

Rosenau, M. J., P. A. surgeon, relieved from duty at Vera Cruz, Mexico, and directed to rejoin his station in Washington, D. C.

Parker, H. B., P. A. surgeon, relieved from duty at Vera Cruz, Mexico, and directed to return to the Bureau at Washington, D. C.

Lumsden, L. L., P. A. surgeon, granted leave of absence for ten days from November 15.

Ramus, Carl, asst.-surgeon, granted leave of absence on account of sickness for nine days from October 28.

Stansfield, H. A., asst.-surgeon, to report to the director of the Hygienic Laboratory for duty.

Goldberger, Joseph, asst.-surgeon, to proceed to Laredo, Texas, for special temporary duty.

Berry, T. D., asst.-surgeon, to proceed to Cleveland, Ohio, and assume temporary command of the service at that port during absence of medical officer in command; on completion of which to rejoin his station.

Francis, Edward, asst.-surgeon, granted leave of absence for fourteen days. Relieved from duty at Vera Cruz, Mexico, and directed to return to the Bureau at Washington, D. C.

Boggess, J. S., asst.-surgeon, granted leave of absence for one month from December 15.

Pierce, C. C., asst.-surgeon, detailed as inspector of unserviceable property on the steamer *Bratton*.

Ebersole, R. E., asst.-surgeon, to proceed to San Antonio, Texas, for special temporary duty.

Ashford, F. A., asst.-surgeon, to proceed to Chicago, Ill., and report to medical officer in command for duty and assignment to quarters.

Roberts, Norman, asst.-surgeon, on being relieved from duty at Chicago, Ill., to proceed to San Diego, Cal., and assume command of the service at that port.

Frick, John, A. A. surgeon, granted leave of absence, on account of sickness, for thirty days from July 31.

Hallett, E. B., A. A. surgeon, granted leave of absence for four days from November 25.

Maguire, E. S., pharmacist, granted leave of absence for thirty days from December 5.

Southard, F. A., pharmacist, granted leave of absence for seven days from November 14, 1903, under paragraph 210 of the Regulations.

Neves, George, pharmacist, directed to proceed to Chicago, Ill., and report to the medical officer in command for duty and assignment to quarters.

APPOINTMENT.

Ashford, Francis Asbury, of the District of Columbia, commissioned (recess) as asst.-surgeon in the Public Health and Marine-Hospital Service.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Nov. 20, 1903:

SMALLPOX—UNITED STATES.

California: Los Angeles, Nov. 1-7, 1 case.
Louisiana: Baton Rouge, Oct. 24-Nov. 7, 2 cases.

Massachusetts: Lawrence, Nov. 8-14, 1 case.
Mississippi: Natchez, Oct. 25-Nov. 7, 3 cases.
Nebraska: Omaha, Aug. 1-31, 3 cases.
New Hampshire: Manchester, Nov. 8-14, 2 cases.
New Jersey: Camden, Nov. 8-14, 1 case.
New York: Buffalo, Nov. 2-9, 1 case.
Ohio: Cincinnati, Nov. 6-13, 9 cases; Youngstown, Nov. 8-14, 12 cases.
Pennsylvania: Nov. 8-14, Philadelphia, 34 cases, 1 death; Pittsburg, 49 cases, 5 deaths.
South Carolina: Charleston, Nov. 8-14, 1 case.
Texas: San Antonio, Oct. 1-31, 20 cases.
Utah: Salt Lake City, Nov. 1-7, 1 case.

SMALLPOX—FOREIGN.

Austria-Hungary: Prague, Oct. 25-31, 11 cases.
Brazil, Pernambuco, Sept. 17-30, 15 deaths; Rio de Janeiro, Oct. 11-18, 40 cases, 38 deaths.
Chile: Antofogasta, Sept. 1-30, 23 deaths.
China: Hongkong, Sept. 27-Oct. 3, 1 case, 1 death.
Ecuador: Guayaquil, Oct. 11-31, 2 deaths.
France: Marseilles, Oct. 1-31, 21 deaths; Paris, Oct. 25-31, 4 cases.
Great Britain: Glasgow, Oct. 30-Nov. 7, 17 cases; London, Oct. 25-Nov. 7, 17 cases; Manchester, Oct. 18-24, 5 cases; Newcastle-on-Tyne, Oct. 25-31, 6 cases.
Italy: Catania, Oct. 29-Nov. 5, 1 death.
Malta: Oct. 18-31, 3 cases, 2 deaths.
Mexico: City of Mexico, Oct. 26-Nov. 1, 3 cases, 1 death.
Netherlands: Amsterdam, Nov. 1-7, 2 cases.
Porto Rico: San Juan, Oct. 31, 2 cases.
Russia: Moscow, Oct. 18-24, 2 deaths; Odessa, Oct. 11-18, 6 cases; St. Petersburg, Oct. 18-24, 27 cases, 1 death.
Spain: Barcelona, Oct. 18-31, 2 deaths.
Turkey: Constantinople, Oct. 26-Nov. 1, 2 deaths.

CHOLERA—FOREIGN.

India: Calcutta, Oct. 11-17, 3 deaths; Madras, Oct. 3-9, 1 death.
Turkey: Siarbikir, Oct. 8-15, 5 deaths daily; Severek, Oct. 8, present.

YELLOW FEVER—UNITED STATES.

Texas: Cannel, to Nov. 18, 19 cases; Laredo, Nov. 11-19, 195 cases, 17 deaths; Minera, Nov. 11-13, 9 cases; San Antonio, Nov. 12-14, 3 cases, 3 deaths.

YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, Oct. 11-18, 2 cases.
Mexico: Oct. 11-24, Citas, 2 deaths; Cuidad Victoria, 23 cases, 18 deaths; Linares, 412 cases, 36 deaths; Merida, 20 cases, 7 deaths; Nuevo Laredo, Oct. 11-Nov. 14, 52 cases, 21 deaths; Oct. 11-24, Progreso, 1 case, 1 death; Salina Cruz, 8 cases, 2 deaths; Tehuantepec, 4 deaths; Vera Cruz, 66 cases, 32 deaths.
Venezuela: Barquisimeto, Oct. 12-13, 2 deaths; Cagua, Oct. 13, present; Maracaibo, Oct. 18-24, 1 case, 1 death.

PLAGUE—UNITED STATES.

California: San Francisco, Nov. 4-7, 2 cases, 2 deaths.

PLAGUE—INSULAR.

Brazil: Rio de Janeiro, Oct. 11-18, 44 cases, 22 deaths.
British East Africa: Port Elizabeth, Sept. 20-Oct. 3, 3 cases, 2 deaths.
China: Hongkong, Sept. 27-Oct. 3, 2 cases, 2 deaths.
Egypt: Alexandria, Oct. 11-23, 16 cases, 11 deaths.
India: Bombay, Oct. 14-20, 60 deaths; Calcutta, Oct. 11-17, 17 cases, 17 deaths; Karachi, Oct. 4-18, 12 cases, 10 deaths; Madras, Oct. 10-16, 1 death.
Mauritius: Oct. 16-22, 100 cases, 66 deaths.

Medical Organization.

Florida.

SUWANEE COUNTY MEDICAL ASSOCIATION.—A number of physicians of the county met in Live Oak, November 2, and organized a county society with the following officers: Dr. Henry F. Airth, Live Oak, president; Dr. Gelon B. Smithson, Wellborn, vice-president; Dr. W. C. White, Live Oak, secretary; Dr. C. S. Brown, Live Oak, treasurer, and Drs. Silas T. Overstreet, Live Oak; F. E. Thomasson, Live Oak, and Adelbert D. Puterbaugh, Branford, censors.

Illinois.

LIVINGSTON COUNTY MEDICAL SOCIETY.—At the sixth semi-annual meeting of the society, held in Pontiac, November 12, the committee on affiliation with the Illinois State Medical Society reported favorably, and the changes in the constitution necessary to make it conform to that of the state society were adopted.

KANE AND MCHENRY COUNTIES MEDICAL SOCIETY.—At the seventy-seventh semi-annual meeting of the Fox River Valley Medical Association, in Aurora, November 10, after an exposition of the standard plan of organization by Dr. Malcolm L. Harris, Chicago, representing the state society, it was agreed that the society should ask for recognition from the Illinois State Medical Society as the official society of Kane and McHenry counties. The following officers were then elected: President, Dr. Henry J. Gahagan, Elgin; vice-president, Dr. Frank H. Jenks, Aurora, and secretary and treasurer, Dr. J. Forrest Bell, Elgin.

Indiana.

PORTER COUNTY MEDICAL SOCIETY.—Dr. George F. Keiper, Lafayette, councilor for the Tenth District, announces the reorganization of the Porter County Medical Society.

Iowa.

OSCEOLA COUNTY MEDICAL SOCIETY.—The physicians of Osceola County met at Sibley, November 10, and organized a county society with the following officers: Dr. William E. Ely, Ocheyedan, president; Dr. Clinton C. Cady, Harris, vice-president; Dr. Felix J. Langenhorst, Ashton, secretary, and Dr. Louis H. Heetland, Sibley, treasurer.

GREENE COUNTY MEDICAL SOCIETY.—A number of the medical fraternity of Greene County met at Jefferson, November 9, and organized a society with the following officers: Dr. Fred M. Dean, Jefferson, president; Dr. Geo. H. Grimmell, vice-president; Dr. George W. Kester, Grand Junction, secretary and treasurer, and Drs. J. Will Presnell, Scranton; Charles Enfield, Jefferson, and Fred. M. Dean, Jefferson, censors.

Kansas.

SMITH COUNTY MEDICAL SOCIETY.—This society was organized at Smith Center, November 16, as an auxiliary to the Kansas State Medical Society with the following officers: President, Dr. M. Francis Leary, Gaylord; vice-president, Dr. Bernard W. Slagle, Smith Center, and secretary-treasurer, Dr. Daniel W. Relihan, Smith Center. The society starts out with a membership of twelve.

Maryland.

CLARKE AND FREDERICK COUNTIES MEDICAL ASSOCIATION.—About fifty of the physicians of Frederick and Clarke counties have organized a medical society at Winchester with the following officers: Dr. William J. Best, Brucetown, president; Dr. P. Powell Page, Boyce, vice-president, and Dr. Samuel P. Latane, Winchester, secretary.

Book Notices.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine, Medico Chirurgical College, Philadelphia. Sixth Edition, Thoroughly Revised. Fully Illustrated. Cloth. Pp. 1,300. Price, $5.50 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

Anders' book has become recognized as one of the most practical works on the practice of medicine in the English language and no better proof of this is wanted than the fact that six editions have been called for in as many years. This edition is not simply a reprint of the former ones, but is rewritten in many parts. Especially is this true of the paragraphs relating to the etiology of malarial fever, yellow fever, and other diseases of presumed parasitic origin. The majority of the chapters show evidence of revision and every subject is brought thoroughly up to date.

THE MICROSCOPICAL EXAMINATION OF FOODS AND DRUGS. A Practical Introduction to the Methods Adopted in the Microscopical Examination of Foods and Drugs, in the Entire, Crushed and Powdered States. By Henry George Greenish, F.I.C., F.L.S., Professor of Pharmaceutics to the Pharmaceutical Society of Great Britain. With 168 Illustrations. Cloth. Pp. 316. Price, $3.50 net. Philadelphia: P. Blakiston's Son & Co. 1903.

The author makes a plea for the more general use of the microscope in the detection of adulteration of foods and drugs in the powdered form. Directions are given for the detection of the different starches and textile fibers; certain drugs such as lycopodium, ergot, etc., woody substances, leaves, barks, seeds, fruits, etc., of various kinds. The directions for mounting, preparing and examining are sufficiently elementary and full to satisfy every one who understands how to use the microscope. The book is well illustrated.

ELEMENTS DE SEMEIOLOGIE INFANTILE. Par le Dr. Fernandes Figueira, ancien chef de clinique pediatrique a la Faculté de Médecine, Rio de Janeiro, Preface de M. Le Dr. Hutinel, Professor a la Faculté de Médecine de Paris. Avec 78 figures dans le texte. Cloth. Pp. 632. Paris: Octave Doin, Editeur. 1903.

This work will fill a useful place in the hands of the practitioner who reads the language in which it appears. Though written by a Brazilian physician it is published in France and is, therefore much more accessible, as there are comparatively few readers of the Portuguese language. The author has brought together with much industry the principal symp-

tomatology and arranged it in a natural classification so that any particular symptom can be readily found. The book is fully illustrated and the cuts are generally good and instructive. Each chapter has attached to it a bibliography, and while we think more American authorities might have been quoted with advantage, nevertheless it shows that the author's reading has been very extensive and that he has taken his facts from all sources.

PHYSIOLOGICAL ASPECTS OF THE LIQUOR PROBLEM. Investigations Made by and Under the Direction of W. O. Atwater, John S. Billings, H. P. Bowditch, R. H. Chittenden and W. H. Welch, Sub-Committee of the Committee of Fifty to Investigate the Liquor Problem. Vols. I and II. Cloth. Pp. 396 and 379 Respectively. Price, $4.50 net Per Set. Boston and New York: Houghton, Mifflin & Co. 1903.

The alcohol question is one of the living issues of the day—a statement that can not be denied, whichever side of the question one may take. These two volumes form a valuable contribution to the literature of the subject and contain the testimony of perhaps the most competent experts on the various phases of the question. The general report of the subcommittee of the committee of fifty, consisting of Drs. J. S. Billings, W. O. Atwater, H. P. Bowditch, R. H. Chittenden and W. H. Welch, sums up the conclusions which were deduced from the various investigations reported elsewhere in the works. The rest of the two volumes is made up of separate reports on instruction in the physiologic action of alcohol, the effect of alcohol on digestion and secretion, the effects of the use of alcoholic drinks on brain workers and the relation of drink habits to insanity, the influence of alcohol on growth, the pharmacologic action of ethyl alcohol, the nutritive value of alcohol and its pathologic effects. The report on physiologic instruction gives the results of an inquiry by Drs. Bowditch and Hodge, who notice the opinions expressed in the text-books of this country and Europe and criticise the instruction manuals endorsed by the Woman's Christian Temperance Union for primary and grammar schools, giving also the answers of public school teachers as to their opinions as to the fitness and value of these works and the instruction they convey. The opinions expressed are naturally various, both those of physiologic experts as well as those of school teachers, and the condemnation, by some, of the text-books approved by the Woman's Christian Temperance Union is rather severe. We regret that the tone of this report is not a little more judicial. The report concludes with a summary of the state laws on physiologic instruction in regard to alcohol. The report on digestion and secretion by Dr. Chittenden is lengthy and complete, and may be taken as a very fair critical summary of our present knowledge of the subject as well as containing valuable original data. The data relating to the use of alcoholic drinks among brain workers and the relation of the drink habit to insanity are less valuable, it appears to us, as compared with certain other of the memoirs. The first consists mainly of the testimony of individuals and is, therefore, not entirely free from the possibilities of individual preferences or prejudices. That on the relation of the drink habit to insanity is necessarily incomplete and the statistics that can be obtained meeting all the requirements are rather limited. Dr. Hodge's memoir on the influence of alcohol on growth is interesting as well as that on the influence of alcohol on normal vital resistance of rabbits to infection. The experiments were naturally carried out on the lower animals, such as dogs and rabbits, and the facts are not necessarily applicable to the human species; still they are significant and interesting so far as they go. Perhaps the most valuable portion of the work is contained in the two principal memoirs of the second volume, namely, those on the pharmacologic action of ethyl alcohol, by Professor Abel, and on the nutritive value of alcohol, by Professor W. O. Atwater. Both of these are worthy of study by temperance workers and others. Considering the fact that Professor Atwater's assertion that alcohol as a food value has been largely utilized in some quarters, it is of interest to consider certain statements in which he speaks of alcohol as at best a very expensive sort of nutriment in healthy people and only valuable when the user is unable from disability or disease to obtain sufficient nourishment from ordinary food materials. The concluding passage reads as follows: "The reason for emphasizing these facts is that any statement which compares the nutritive value of alcohol with that of ordinary food is in danger of being used by interested persons or those who are inclined to self-indulgence without the quality needed to work out the whole truth." The memoir on the pathologic effects of alcohol by Welch, though short, is excellent, and the Woman's Christian Temperance Union can derive all the arguments that it really needs from its statements. We believe the two volumes will serve a very useful purpose, and be in every way a sort of landmark in the discussion of the alcohol question. As to the general conclusions of the committee, which condemn—or perhaps to use a less emphatic term, discourage—systematic instruction of children in the primary schools on the subject of alcohol, there will, of course, always be a certain amount of difference of opinion. The question whether it is better to instruct young children as to the evil of alcohol or wait until they are older is perhaps one that teachers can decide better than we. What is said, however, about the teaching of specially isolated matter now being overdone is correct. It is important that what is told should be within the range of accepted probability, if not absolutely of demonstrated fact, and too much zeal has overdone the temperance instruction. The fact that quite a number of foreign physiologists to whom we owe a large part of our knowledge on the subject signed with reservations the statement by Sir Michael Foster which was sent them, is a matter of some little moment. It is unfortunate that there is so much difference of opinion on the subject, though the reading of this report and its contained papers shows that as regards the main points the authorities agree on the principal facts.

Society Proceedings.

COMING MEETINGS.

Southern Surgical and Gynecological Association, Birmingham, Ala., Dec. 15.

Western Surgical and Gynecological Association, Denver, Dec. 28-29.

NORTHWEST MEDICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Oct. 6, 1903.

Dr. A. C. Buckley in the Chair.

Pneumonia with Hemiplegia.

DR. HARRY LOWENBURG reported a case of lobar pneumonia with delayed resolution but recovery, complicated by hemiplegia with partial recovery.

DR. LUTHER C. PETER referred to the fact that hemiplegia occurs considerably in the infectious fevers, particularly typhoid, coming on usually during convalescence, when the circulation is exceedingly slow, and being usually due to a thrombosis. In the case described, however, he felt that the sudden onset pointed to an embolism.

DRS. M. P. WARMUTH and A. C. BUCKLEY reported cases.

A Case of Ludwig's Angina.

DR. C. M. HARRIS described this disease: A streptococcus infection about the submaxillary gland and alveolar tissue beneath the mucous membrane in the floor of the mouth, with cellulitis tending to sloughing rather than to pus. Symptoms: Local discomfort followed in from two to four days by swelling and pain, pressure causing considerable dysphagia and sometimes salivation and dyspnea; in some, septicemia or gangrene. Treatment: Prompt incision and removal of any gangrenous tissue, application of carbolic acid, constitutional treatment for septicemia. He reported a case: A patient remained in a public bath two or three hours; the following day there was pain in the right ear and swelling in the right submaxillary region. The symptoms increased, a hard tense swelling unattended by external redness or any heat developed, and on the fifth day began to diminish; on the seventh day disappeared, and the mouth could then be opened; on the ninth day pus was discharged from the affected ear; this continued for about a week, when it ceased and the patient has since enjoyed good health. The constitutional treatment consisted of ¼-

grain doses of calomel hourly for eight to ten hours during the first four days of the disease, and local applications of peroxid of hydrogen and other antiseptic solutions.

DISCUSSION.

DR. JUSTUS SINEXON reported a case of cervical cellulitis in an engineer. He was given 1/10-grain doses of calomel every hour for four or five days. On the fifth day an incision was made in the floor of the mouth without any result, which after the application of a belladonna ointment was followed by the discharge of a small amount of pus and the man made a good recovery.

DR. WILLIAM L. PEPPER referred to the frequency of the occurrence of cellulitis during epidemics of influenza, as well as in cases of peridentitis, which he ascribed to the infection traveling through the glands.

DR. T. TURNER THOMAS reported a case in which the incision had been made on about the seventh or eighth day of the disease, followed by hot applications of bichlorid. The patient had considerable dyspnea, which was increased after the operation, and during a severe attack a tracheotomy was attempted, but before it was performed the patient died. He felt that the danger in this condition was principally due to the fact that it involved the deep structures, the least resistance being in the direction of the mouth and throat. He recommended the employment of early free incision, and believed that the prognosis was also dependent on the kind of infection.

DR. HARRIS said that there was probably some danger in the conservative treatment, and that radical measures were probably the surest means.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Nov. 5, 1903.

The President, Andrew H. Smith, M.D., in the Chair.

Eye Lesions Occurring in Diseases of the Heart, Blood Vessels and Kidneys.

DR. CHARLES STEDMAN BULL presented this paper, and said that with obstruction to the return circulation a venous hyperemia of the retina is usually seen; in aortic insufficiency alternate reddening and blanching of the optic disc, frequently; in advanced heart disease, retinal pulsation, almost constantly; in fatty heart, as also in syphilitic, nephritic or diabetic degeneration of the blood vessels, numerous retinal hemorrhages, commonly. Thrombosis and embolism are common accompaniments of rheumatic endocarditis. Emboli of the choroid does not cause marked symptoms, but an embolism of the central trunk of the retinal artery causes sudden blindness, which is, with few exceptions, permanent. Occasionally a collateral circulation is established; this is favored by massage of the eyeball.

The most frequent lesions associated with disease of the kidneys are in the retina and optic nerve: (1) Degenerative inflammation of the retina with hemorrhages and whitish patches, and (2) an exudative inflammation, occurring with parenchymatous nephritis, and distinguished by whitish patches arranged in a stellate manner around the macula lutea, and usually accompanied by retinal hemorrhages and edema of the optic disc and surrounding retina. The disease is always bilateral, though it may appear in one eye before the other is affected. Retinitis albuminurica must be regarded as one of the terminal lesions of nephritis.

DISCUSSION.

DR. FRANCIS P. KINNICUTT said that amaurosis might occur in renal disease without the usual symptoms of nephritis. In some cases retinal changes are rather an indication of general vascular disease than truly albuminuric. With a well-marked retinitis and a history of chronic nephritis and of arterial disease death is probable in two years in hospital practice; but in private practice the prognosis is better.

DR. WARD A. HOLDEN considered the pathology of retinitis albuminurica, and the subject was further discussed by Drs. E. Gruening, J. W. Brannan and H. Knapp.

DR. THOMAS R. POOLEY said that too much stress should not be put on the occurrence of retinal pulsation, for, in a study of this subject in connection with heart disease, he had found it exceedingly difficult in many instances to detect any pulsation. He doubted very much if the ophthalmoscopic picture supposed to indicate embolism of the central artery of the retina was really dependent on this cause. In nearly all of the carefully observed cases a thrombosis had also been found. The typical appearance of Bright's neuroretinitis was not often seen; in many cases of granular kidney he had only observed petechial hemorrhages. As one of the earliest writers in this country who had advocated the induction of premature labor in cases of albuminuric retinitis, he wished again to enter a plea for such practice. If labor were induced early, it was probable that sight would be restored.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

To Kill Bedbugs.

A member writes asking the best way of disposing of bedbugs. He has been unsuccessful in his endeavor to assist some patients in getting rid of them by means of fumigations with sulphur and formaldehyd. He has also tried carbolic acid and bichlorid of mercury in the strength used in surgery, which have proved a failure. In answer to his inquiry we would suggest a strong solution of bichlorid of mercury in alcohol applied to the bed, the object being to leave a good deposit of the bichlorid after the alcohol has evaporated. We feel sure of his success if he will make the solution sufficiently strong. This could also be used with a syringe in the crevices about the room.

A Good Cough Syrup.

A subscriber recommends the following well-tried combination for the relief of the cough in bronchitis:

℞.	Codinæ sulph. ..... gr. iii	20
	Ammon. chloridi	
	Spts. chloroformi, āā ..... ʒiss	6
	Syr. tolutani	
	Ext. glycyrrhizæ flu., āā ..... ʒi	30
	Acidi hydrocyanici dil. ..... gtts. xv	1
	Aquæ q. s. ad ..... ʒiv	120

M. Sig.: One teaspoonful every four hours.

[This might be made more palatable by the omission of the glycyrrhiza or of the syrup of tolu, especially in cases with impaired digestion or appetite.]

High Arterial Tension.

According to an abstract in *N. Y. Med. Jour.*, M. Huchard lays but little stress on the value of the iodin preparations as reducers of arterial overtension. Iodin medication, however, is indicated when marked arteriosclerosis is present, in which case the resolvent action of the iodin preparations is explained by phagocytosis. In the period preceding sclerosis iodin preparations, according to the author, are valueless, and in their stead the essential vasodilators should be employed, such as amyl nitrite, trinitrine or sodium nitrite.

The following combination is recommended by him:

℞.	Sodii nitritis ..... gr. iii	20
	Pot. nitratis ..... gr. xv	1
	Sod. bicarb. ..... gr. xxx	2
	Aq. destil. ..... ʒii	60

M. Sig.: The entire mixture to be taken at one dose and repeated once or twice daily; or:

℞.	Sodii nitritis ..... gr. xxx	2
	Pot. nitratis ..... ʒiiss	10
	Sodii bicarb. ..... ʒv	20
	Aq. destil. ..... ʒx	300

M. Sig.: A dessertspoonful to a tablespoonful once or twice daily in half a glass of water. The advantages in the foregoing combination are that when the sodium nitrite is combined with the potassium nitrate and then rendered alkaline

with the sodium bicarbonate the sodium nitrite becomes less noxious and is of great value in lowering arterial tension, which remains low for some time after the preparation is discontinued.

Uremic Dyspnea.

The following method of producing profuse perspiration is recommended by *Jour. des Pract.* in the treatment of uremia:

℞. Pilocarpinæ nitratis .....gr. ¾ | 05
Vaselini .....℥ii 60

M. Sig.: To be rubbed into the chest and a bandage applied until profuse perspiration is produced.

A Tonic for Children.

Iodin, according to an abstract in *N. Y. and Phil. Med. Jour.*, is recommended as a tonic and alterative in poorly nourished children, combined as follows:

℞. Tinct. iodi .....gr. lxxv 5
Ext. catechu 3v 20
Alcoholis 3iiss 10
Glycerini .....℥iii 90
Syr. idaei .....℥vii 210

M. Sig.: One tablespoonful once or twice daily.

In rachitic children the following has been advised:

℞. Acidi calcii phos. .....gr. lxxv 5
Tinct. essentiæ anis 3iiss 10
Syr. simplicis .....℥vi 180

M. Sig.: One tablespoonful every morning before breakfast.

Chapped Hands.

Brocq of Paris, according to an article in *Ther. Gazette*, recommends the following treatment for chapped hands:

℞. Glycerini .....℥iss 45
Tinct. peru. .....℥ss 15
Sodii salicylatis 3i 4
Aq. lactucarii .....℥vi 180

M. Sig.: Wash the hands with this solution twice daily; or:

℞. Acidi tannici .....gr. viiss | 50
Glycerini 3v 20
Aquæ rosæ .....℥iii 90

M. Sig.: Apply locally to the hands.

And as an ointment one of the following combinations should be applied at night:

℞. Essentiæ rosæ .....gtt. i | 06
Vanillin .....gr. viiss | 50
Lanolini .....℥iss 45

M. Ft. unguentum. Sig.: Apply locally at night; or:

℞. Menthol .....gr. xv 1
Salol .....gr. xxx 2
Olei olivæ 3iiss 10
Lanolini .....℥iss 45

M. Ft. unguentum. Sig.: Apply locally at night.

La Grippe.

The following combination is recommended by *Rev. Francaise de Med. et de Chir.*, in the treatment of la grippe:

℞. Antipyrini .....gr. xxx 2
Sodii benzoatis .....gr. xxxvii 2 | 50
Aq. laurocerasi 3iiss 10
Syrupi codeinæ 3vi 24
Aquæ destil. .....℥iii 90

M. Sig.: One to two tablespoonfuls every hour until the entire amount is taken.

The Vaginal Douche.

In giving directions for the use of the vaginal douche, F. B. Robinson, in *Ther. Gazette*, states that a fountain syringe holding fourteen quarts should be used, which can be made from such a sized pail to which a tube is properly attached. A siphon tube may be employed. The patient should be instructed to begin with two quarts at a temperature of 105 F. and increase the heat daily until it is as hot as can be borne, and at the same time increase the quantity one pint each day until the fourteen quarts are taken. The douche should be used twice a day, morning and evening, resting for at least three-quarters of an hour after the douche. It should require, according to the author, at least thirty minutes to take the douche of fourteen quarts. The patient while taking the douche should lie on her back with thighs flexed on the abdomen and legs flexed on the thighs. A handful of sodium chlorid and a teaspoonful of alum should be added to each gallon of water, the salt being used to dissolve the mucus and pus and the alum to act as an astringent, check waste secretions and harden the tissues. He condemns the use of carbolic acid as useless and the bichlorid of mercury as dangerous. Zinc and lead salts are not so valuable as alum as astringents, while mercurial salts, carbolic acid, boracic acid coagulate the discharge; however, the best disinfectants are carbolic acid and potassium permanganate. He recommends sodium sulphate as the best general solvent of the discharges, dissolving mucus, pus, leucocytes, etc. The best vaginal tube is the largest that can be conveniently used in order to distend the vaginal fornices and consequently allow the fluid to reach the upper end of the vagina. He employs a tube which is introduced in a closed state and expands after being so introduced. The value of the vaginal douche, according to the writer, consists in:

1. Contracting the muscle and connective tissue.
2. It contracts the lymphatics, veins and arteries.
3. It absorbs exudates.
4. It checks secretions.
5. It stimulates.
6. It relieves pain and cleanses the parts.
7. It checks hemorrhages and curtails inflammation and serves as a good drainage for the genital tract. Emphasis is also placed on the utility of the douche depending on the quantity, the temperature, its composition, the position of the patient and the systematic use. The douche, to be curative, should be continued for months.

Pains of Tabes and Neuritis.

Bouchard, in *Internat. Clinics*, recommends small doses of mercury and potassium iodid as a very efficient combination in the treatment of tabetic and neuritic pains combined as follows:

℞. Hydrarg. biniodidi .....gr. 1/6 | 01
Potassii iodidi 3i 4
Aquæ .....℥iii 90

M. Sig.: Thirty drops to be injected locally about the seat of the pain.

The same treatment is also recommended in the obstinate late manifestations of syphilis. It aids in the rapid absorption of the gummatous lesion.

Chronic Eczema of the Scalp.

Shoemaker recommends the following combination in the treatment of chronic eczema of the scalp in children:

℞. Creosoti .....m. viii | 50
Hydrarg. chloridi mitis.
Camphoræ, āā .....gr. x | 65
Ung. zinci oxidi .....℥ss 15
Olei olivæ q. s. ad.....℥iii 90

M. Sig.: Apply locally to the scalp once or twice daily.

Spasmodic Croup.

L. Boyer, in *Med. Rev. of Reviews*, recommends the following treatment of spasmodic croup:

℞. Hydrarg. chloridi mitis .....gr. iii | 20
Sacchari albi 3ss 2

M. Ft. chart. No. viii. Sig.: One every two hours, alternating with the following:

℞. Apomorph. hydrochlor. .....gr. 1/6 | 01
Acidi hydrochlor. dil. .....m. ii | 12
Syr. simplicis 3ii 8
Aq. destil. q. s. ad.....℥iv 120

M. Sig.: One or two teaspoonfuls every two hours.

Syrup of the Iodid of Iron.

M. C. Hoge, in an article in the *Virg. Med. Semi-Monthly*, recommends the syrup of the iodid of iron in teaspoonful doses three times a day as an alterative. It acts as a diuretic and promotes secretions and produces an increase in the patient's weight. He advises it in the dry, rasping coughs and colds

where ordinarily codein and quinin are used improperly. He also employs it in the treatment of amenorrhea and dysmenorrhea in scrofulous women in half-teaspoonful doses three times a day. To anemic subjects suffering from rheumatic gout he administers it combined with pure cod liver oil.

Medicolegal.

Damages Allowed for Loss of Eyesight.—In the personal injury case of Vant Hul vs. the Great Northern Railway Company, where the party suing, a young man of 18 years, lost the entire vision of one eye, and, according to the testimony, the other eye was impaired to the extent of about nine-tenths, with a strong probability that the sight would ultimately be entirely lost, the Supreme Court of Minnesota holds that it could not be said that a verdict of $14,400 was excessive.

Seamen Entitled to Medical Care at Expense of Ship.—The Supreme Court of Washington says, in the personal injury case of Sanders vs. The Stimson Mill Company, that the authorities sustain the contention that under the maritime law a seaman who receives an injury while in the service of the ship is entitled to medical care, nursing and attendance, and to a cure, so far as is possible, at the expense of the ship, regardless of whether or not the condition of the seaman is brought about by the negligence of the owners of the ship, or is the result of disease or accident. But this does not go beyond expenses incurred in getting well. And it has been frequently decided that it makes no difference whether the medical attendance was on board the ship, or whether the party requiring the attendance had been removed to some other place. The action may be brought either in the federal or state courts. In the case of Holt vs. Cummings, 102 Pa. 212, the action was brought by the physician who waited on the disabled seaman, an engineer of a tugboat employed in the Delaware River.

Death from Appendicitis Caused by Bicycle Ride Not "Accidental."—The evidence of the party suing in the case of Appel vs. the Ætna Life Insurance Company tended to prove, what the Fourth Appellate Division of the Supreme Court of New York assumes for the purposes of the case, that the appendicitis which resulted in the death of the insured in this case was caused by a bicycle ride which he took. But the court declares that it can conceive of no theory on which it could be said, from the facts disclosed by the evidence, that the death of the insured resulted from "bodily injuries, effected . . . through external, violent and accidental means," within the meaning of the insurance policy sued on. The most, it states, that could be said was that the result was accidental, but the means which produced it were not accidental. The evidence wholly failed to show that the insured did anything which he did not fully intend to do, or that what he did was not precisely as intended; therefore, the result of such acts—his death—was not produced by "accidental means." The court's attention was not called to any case which holds, and it failed to discover any authority for the proposition, that a result which is produced by means all of which, and every detail of which, was intended, can be said to have been produced by accidental means, simply because the result which followed the employment of such means, exactly in the manner intended, was different from the result anticipated.

Failure to Use Tourniquet.—The Supreme Court of Pennsylvania says, in the malpractice case of De Long vs. Delaney, that the husband of the party suing had his leg badly crushed in attempting to board a railroad train and the party sued, a physician, was called in on the emergency to treat him. The physician rendered the first aids, washed and dressed the wound, bandaged the leg, and then relinquished the case to the family physician, who was expected, and arrived by the same train on which he (the first physician) left. The injured man remained under the care of the family physician for about two hours, and then was put on a train and taken to a hospital, where his leg was found to have bled profusely, and where he died a few hours later from loss of blood. At the trial the party suing proved the foregoing facts; gave some evidence that a tourniquet was an instrument in common use among physicians for stopping the flow of blood, and that it had not been used by the physician sued. She then rested her case, and the trial court entered a non-suit, which the Supreme Court holds was proper. It says that the negligence relied on was the failure to use a tourniquet. But there was no evidence at all, from any witness competent to express an opinion, that a tourniquet should have been used, or that the tight bandage applied by the physician sued was not fully equivalent—in short, that there was any negligence shown. The jury could only have made an uninformed guess. Negligence can not be found in that way.

Validity of Contract Not to Practice in Old Locality.—Two physicians practicing their profession at a certain place as partners entered into a written contract for the dissolution of the copartnership, one purchasing the property of the copartnership, and the other agreeing not to practice medicine in the vicinity of that place. Commenting generally, the Supreme Court of Oklahoma says, Hulen vs. Earel, that these contracts do not seem to be unusual. The books are full of such cases, and probably more of those between physicians than of any other profession or trade. They have been uniformly upheld by the courts of the several states, where they have not been controlled by statutory provision, and equity has always granted relief by injunction to restrain a breach, for the reason, principally, that the injury arising from such breach can not be estimated or repaired. A suit at law affords no adequate remedy, and, the damage being continuing, and accruing from day to day, the object of the contract can only be obtained by the parties to the contract conforming to its express terms. It is, therefore, very proper for a court of equity to enforce such a contract by granting an injunction to prevent a breach when it is within the rules laid down and within the rules of the controlling statute. One of the controlling features in all of the cases on this subject seems to be that, if such contracts are not upheld, the subject-matter would not be salable. But the court holds that this particular contract was in violation of the Oklahoma statute and invalid, although it says that it would have been an easy matter for the parties to have made a contract complying strictly with the provisions of the statute, one of which is that one who sells the good will of a business may agree to refrain from carrying on a similar business within a specified county, city or part thereof, so long as the buyer or person deriving title to the good will carries on a like business therein, whereas it will be observed the contract here was not to engage in the practice of medicine in the vicinity of a certain place, without any limitation.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

November 14.

1 *Gonorrhea in Infants with a Report of Eight Cases of Pyemia. Reuel B. Kimball.
2 *Terminal Syphilis and Tabes. William J. Dougherty.
3 *Traumatic Separations of the Lower Epiphysis of the Humerus and Their Treatment by the Extended Position. With Report of Two Cases. Gilbert G. Cottam.
4 *Emulsion-Albuminuria. Isador H. Coriat.
5 Report of a Needle in the Prostatic Urethra. B. B. Foster.
6 A Case of Lead Osteoperiostitis. W. Moser.
7 Abdominal Pain in Pneumonia. Charles S. Grabin.

1. **Gonorrhea in Infants.**—From experience in the Babies' Hospital of New York, Kimball finds absolute isolation the only recourse in these cases. It might be possible to keep older children in the general ward, but with babies that have to be constantly handled this is impossible, and the utmost precautions are taken in his service to keep apart the clothing, wash cloths, thermometers, nursing bottles, etc. He sums up his conclusions in the following:

1. Gonorrhea prevails among infants and children to an extent not fully appreciated by the medical profession at large, and has become a common epidemic in institutions where numbers of children are placed together.
2. The ordinary clinical forms which the gonococcus infection assumes in children are ophthalmia, vulvovaginitis and pyemia.
3. A series of cases of pyemia, reported in this paper, occurred in infants, in whom no local lesion could be found to explain the mode of entrance of the organism to the general circulation.
4. The suggestion is made that from a stomatitis due to the gonococcus such a systemic infection may arise. Gonorrheal stomatitis in infants is a disease that needs further study.
5. Only by careful exclusion, by microscopical examination and by complete isolation can this disease be absolutely debarred from a hospital where infants are cared for.
6. There is urgent need of public enlightenment on this subject. Those in charge of institutions for children, trained nurses and even parents, should be taught the frequency and virulency of this infection and the ease with which it is spread. It should be the duty of health authorities to include gonorrhea among the acute infectious diseases of children.

2. **Tabes.**—The arguments for and against the syphilitic origin of tabes are reviewed by Dougherty, who concludes that in the great majority of cases at least, if not in all, the weight of evidence favors the late or terminal action of syphilitic poison.

3. **Separation of the Lower Epiphysis of the Humerus.**—The views of the various authors for the treatment of this condition are reviewed by Cottam, who points out their disagreements and then gives his own experience with the extension treatment in 2 cases. They are the only ones he has treated without loss of function to some degree, and he therefore feels encouraged to use the extended position in future, despite the weight of authority against it.

4. **Emulsion-Albuminuria.**—Cramer's type of albuminuria in urine with a milky appearance which is due to some proteid substance in a peculiar physical state is noticed by Coriat, who reports a fourth case in addition to the 3 already on record. Like Cramer's cases, it ended fatally. His case was one of alcoholic delirium with coincident parenchymatous nephritis, with anxiety, fear, cyanosis and suppression of urine. As in the other cases, the milky appearance only showed itself a few days before death and negative tests afforded proof of the absence of neutral fat. All the proteid reactions were present. He thinks we have here a new and hitherto undescribed form of albuminuria in which the proteid exists not in simple solution, but in an emulsion or rather a peculiar colloidal physical state, apart and distinct from the ordinary ones and one which widens our conception of albuminuria.

American Medicine, Philadelphia.

November 14.

8 *Chronic Malaria: Complications and Sequelæ, with Special Reference to Digestive Complications. John C. Hemmeter.
9 *Contribution to the Clinical Study of Cerebrospinal Meningitis. Thomas C. Ely and J. J. Snyder.
10 *The Gastrointestinal Disturbances Associated with Migraine. John A. Lichty.
11 *The Association of Valvular Heart Disease with Tabes. B. Franklin Stahl.
12 *Operation in Hip-joint Disease Without Shortening. R. Preston Robinson.
13 *Gallstones and Gastric Hyperacidity. J. Kaufmann.
14 Human Terata. Austin O'Malley.

8. **Chronic Malaria.**—By chronic malaria Hemmeter understands a condition in which the malarial parasite is continuously present in the blood and which is clinically characterized by relapses of fever, splenic tumor and various complications. Among the complications he notices particularly those of the gastro-intestinal tract and the so-called typhomalaria, coincidence with dysentery, the complication involving the spleen and liver and splenomegaly or Banti's disease. Gastric ulcer may be produced by the malarial parasite, as asserted by Bignami, and it is natural to presume that the same organism may produce lesions in the colon and intestine. The complications on the part of the nervous system are those of mania, as described by Yanarris, hysteria and possibly neuroses. Occasionally paraplegia and hemiplegia complicate malarial fevers, as also meningitis, and both lobar and lobular pneumonia may occur as complications. There is a form of estivo-autumnal fever in which the symptoms are chiefly referred to the lung, and are identical with those of lobar pneumonia, though microscopic examination shows that the lesions present differ widely from the typical pneumonia lesions. The prognosis in these cases is often bad: always grave. Recovery is slow. Empyema may be a complication. Acute bronchitis is very frequent. Tuberculosis and malaria may occur simultaneously. Pleurisy and malaria are occasionally met with. Quinin does not invariably relieve these conditions, for some cases of chronic malaria are not relieved by quinin. Endocarditis may follow, and the ulcerative form occur. Functional diseases are very common. Nephritis is one of the most common complications, usually acute; it generally subsides after the cessation of the malarial attack. It is as much a consequence of malarial infection as it is a complication. Orchitis and epididymitis are rare, and usually have a history of gonorrhea.

9. See abstract in THE JOURNAL of October 17, p. 981.

10. **Migraine.**—Lichty calls attention to gastro-intestinal disturbances occurring with migraine, and says he has tried treating the disease on all the theories that have been evolved, but has fallen back on his old method of leaving off specific treatment, removing reflex and avoiding exciting causes. In many cases attempts at specific treatment have been not only useless but damaging. He remarks that there is no doubt that sodium salicylate has a decidedly beneficial effect. He thinks this is not due to its elimination of uric acid, but that it and calomel have a decided cholagogic effect and have the most efficacy as intestinal antiseptics and stimulants of bile secretion. By correcting the gastro-intestinal disturbance he has been able to reduce the frequency and severity of the attacks of migraine in many patients, sometimes completely curing them. He reports illustrative cases.

11. **Valvular Heart Disease with Tabes.**—The following are Stahl's conclusions:

1. Disease of some part of the circulatory system is present in nearly all cases of advanced tabes.
2. Valvular heart disease occurs in a large percentage of the cases.
3. The intimate relationship existing between syphilis and tabes and the pronounced circulatory changes induced by the former make it reasonable to regard syphilis as the cause of the large percentage of cases of valvular heart disease which we find associated with tabes.

12. **Hip-Joint Disease.**—Robinson reports and illustrates a case, and recommends the method of thoroughly clearing away all diseased bone and débris, carefully preserving the periosteum and stretching it along the track of the old bone and attaching it to the lower margin of the acetabulum. Then he stitches the muscles and fibrous tissue over the periosteum and stretches the leg full length, applying 15 to 20 pounds weight for extension. The wound is allowed to heal by granulation. The patient is instructed to sit up in bed two weeks after the operation and keep the weight on for four months, or a Thomas splint can be used and the patient allowed up after six weeks, but is not allowed to walk for six months. The results in the case that he reports have been excellent. The bone seems to have been reformed, and the limb is restored with comparatively no deformity.

13. **Gallstones and Gastric Hyperacidity.**—Kaufmann first notes Riedel's statement that 97 per cent. of gastralgic cases suffer from gallstones, and that the so-called cases of gastric ulcer reported cured by regular treatment were not cases of ulcer at all. If without hemorrhage, he considers them due to gallstones which have been set at rest for a time by treatment. Kaufmann follows this up with the statement that he considers the examination of the stomach contents absolutely necessary in all cases with pain in the upper abdomen, and that hyperacidity and hypersecretion are closely connected with the formation of gallstones; much more so than generally considered. In looking over the history of his cases he finds that the patients had previously complained of milder disturbances that were attributed to gastric hyperacidity. The subject is one of more than theoretic interest, as a correct interpretation of the condition is necessary to carry out proper treatment. Gallstones do not always require operation; internal treatment often subdues the irritation. When hyperacidity and hypersecretion make it probable that the mucosa of the stomach and of the duodenum is chronicly inflamed, we get the best results by lavage. Nothing acts better than the agents which favorably affect the inflamed

mucous membrane and other organs, such as solution of zinc and silver salts. By improving the chronic gastritis associated with hyperacidity and hypersecretion we may be able to prevent the formation of stones and set those already present at rest.

New York Medical Journal.

November 14.

15 *Urinary Hyperacidity. Thomas R. Brown.
16 *A Plea for the More Frequent Use of Antitoxin. C. F. Welden.
17 Acute Intestinal Obstruction and Necrosis of the Bowel Caused by a Gallstone. F. L. Strauss.
18 *The Fable of the Egg. William S. Ely.
19 Prostatic Hypertrophy and Similar Conditions. William B. Jones.
20 A Case of Rupture of Quadriceps Extensor Femoris Muscle. A. J. Ronginsky.
21 *The Operative Treatment of Chronic Bright's Disease; a Second Communication Based on Reports of 120 Cases. (Concluded.) Ramon Guiteras.

15. Urinary Hyperacidity.—In a former article Brown called attention to the symptoms which he attributes to this condition and which he thinks should be recognized as a cause of the syndrome simulating cystitis. If the acidity of the urine were tested in such cases an early diagnosis could be made and appropriate treatment adopted. Much unnecessary discomfort and pain would be spared the patient, beside the avoidance of the possibility of an erroneous diagnosis and inappropriate treatment. Two cases are reported.

16. Antitoxin.—Welden advocates the more frequent use of antitoxin in smaller doses. He has of late reduced the dose to 2,000 units and made the intervals between the injections shorter; that is, he uses it every three hours until there is a decrease in the severity of the symptoms. In this way we can keep the activity of the organisms under control. He reports one of his worst cases thus treated.

18. Value of Egg Diet.—The use of raw eggs in large quantities in the treatment of neurasthenia and fevers marked by high temperature and rapid waste, is advocated by Ely, who reports cases in which he gave from 12 to 24 raw eggs with up to a gallon of milk per diem. In a few cases some nausea, vomiting and diarrheal troubles followed, in which case he gave only the white of the eggs. He has given as many as forty-eight daily for many days to patients in critical stages of typhoid. They are useful for their supporting and restorative influence. Stimulants are correspondingly decreased. While he has had some patients die while taking eggs, he does not think death was due to their liberal use. He says in giving eggs we should not be chicken-hearted as to their quantity, nor fear albuminuria. In one typhoid patient with acute nephritis the albumin and casts vanished from the urine while thirty-six eggs a day were being taken. He advises a raw egg, swallowed whole every hour, in severe cases, and cites numerous instances of what he calls "the resurrection power of the egg."

21. Chronic Nephritis.—Guiteras' article is concluded in this number. He gives an extensive tabulation of cases, and ends with the following conclusions:

1. Chronic nephritis should not be operated on until medical treatment has proved of no avail.
2. The time for operation is when it is noticed that the process is advancing rapidly and we fear that the heart will soon become overtaxed.
3. The operation for chronic Bright's disease which has proved least dangerous and which has shown the best results, is nephropexy performed on a single movable kidney.
4. The most unfavorable cases for operation are those of diffuse nephritis.
5. Cases of general anasarca with bad heart action should not be operated on: if the heart action is good an operation performed as a *dernier ressort* may give the patients a few extra months of life, provided they survive it.
6. Where there has been a marked destructive process in the kidneys as a result of a nephritis, the operation may relieve them for a number of weeks or months, but they generally fail again and die when the new capsule begins to contract.

Boston Medical and Surgical Journal.

November 12.

22 *Present Problems—An Address to the Nurses of the Lakeside Hospital. J. G. Mumford.
23 *Stomachal and Intestinal Derangements and Affections of the Fauces, Pharynx and Air Passages. Beverley Robinson.
24 *Routine Treatment in a Genito-urinary Clinic: Functions of Such a Clinic. F. J. Cotton and R. F. O'Neil.
25 Some Principles Involved in the Therapeutic Applications of Radioactivity. William Rollins.

22. Nursing Problems.—Mumford's address is in its way interesting as not being exactly of the ordinary type of such addresses. He calls attention to the trials nurses are likely to experience, the lack of progress which is one of the drawbacks of the nursing profession, the mistake of starting in as special nurses, the ethical desirability of making concessions to the poor and especially to those of the middle class whose resources are limited but who are not exactly charity patients, the avoidance of Chauvinism, that is, the setting up of themselves as better than their sisters from other institutions; the choice of work, the probabilities of marriage, and the consequent curtailment of duties of the nursing profession as a life-work, etc. He advises nurses to cultivate some hobby outside of their profession to keep themselves broader-minded and more in touch with the outside world, neglecting, of course, none of their hygienic or their nursing duties.

23. Digestive Disorders and Affections of the Air Passages.—Robinson calls attention to the association of digestive and intestinal disturbances with affections of the nose and throat and the possibility of relieving the latter by attention to the former.

24. The Genito-Urinary Clinic.—The methods and experiences of the genito-urinary department of the Boston Dispensary are first described by Cotton and O'Neil, as well as their routine methods. They advise the use of strong carbolic acid, followed by alcohol in chancroids, subsequent instructing the patient to remove the scabs at each of the frequent home dressings. A thoroughly drained wound of this kind will rarely give rise to serious glandular complications, as their experience has shown. As regard urethral infection, they believe that the best treatment in all acute anterior gonorrheas is with copious and frequent irrigations combined in favorable cases with the use of protargol and other silver germicides. Later in the disease, astringent irrigations, medication by the endoscope and graduated stretching have their place. Posterior infections do best under not too frequent local treatment, begun only after the stormy stage is past. In the second part of their article they discuss the question of the routine treatment of gonorrhea and its value, the education of the patient and the public, protection of the patient's family and of the public, the education of the practitioner, student, etc. They believe it would be for the best interests of all concerned that a special genito-urinary clinic should treat cases of gonorrhea only under such conditions as are, in the surgeon's judgment, consistent with appropriate treatment and good results, refusing to help those who will not co-operate loyally in the treatment. The difficulty of keeping the patients under treatment is very great.

Medical News, New York.

November 14.

26 *Chronic Villous Arthritis, with Special Reference to Its Etiology and Pathology. (To be continued.) Charles F. Painter and William G. Erving.
27 *Treatment of Tapeworm. Samuel P. Gerhard.
28 *X*-ray Treatment of Cancer of the Uterus. Methods and Results. Sinclair Tousey.
29 *Why Not Absolute Precision in Chyme Analysis? Mark I. Knapp.
30 *Precipitins and Their Medicolegal Use. (Continued.) James Ewing and Israel Strauss.

26. Chronic Villous Arthritis.—Painter and Erving's article is mainly a report of cases. Their view is that many of these conditions considered as tumors or lipomata are really degenerated villi, but they give rise to rather different symptoms than the ordinary synovial fringe. (The article is to be continued.)

27. Tapeworm.—The various remedies employed for tapeworm, such as male fern, kousso, pomegranate, turpentine, kamala, pumpkin seed, etc., are noticed by Gerhard, who finds the combination of male fern and pelletierine the most suitable. There is no necessity for the patient to make several days' preparation. The loss of one meal, breakfast, is all that is required. The patient is instructed to clear out the bowels the day previous with one or two large doses of castor oil or salts. One dose may be given in the morning and one at night, an hour or so after a light supper. The next morning as early as possible—say at 6 o'clock—give a dose of

pelletierine tannate, 20 gr., in two capsules. When this has operated freely, in about two or three hours begin with the following:

℞. Olii resinæ aspidii.....3ii
Aetheris.....3ii
Hydrargyri chloridii mitis.....gr. xii
M. et div. ni capsulæ No. xvi. Sig.: Two every ten minutes.

Of course, no food is taken during this time. In two or three hours the worm will be expelled whole with the head. It is well to instruct the patient to pass all bowel movements into a vessel of warm water. No traction on the protruding worm should be permitted. The patient can then rest, and if there is any depression light food can be given.

29. **Chyme Analysis.**—The points emphasized in Knapp's paper are stated in the beginning as: (1) No better indicator is known for free HCl than supersaturated alcoholic solution of tropeolin 00. (2) That the dimethylamidoazobenzol as an indicator for only free HCl acid in chyme is absolutely wrong and misleading, but that as it reacts also on very weak solutions of organic acids it can be used for the quantitative determination of such acids. (3) That by the successive use of tropeolin, dimethyl and phenolphthalein in the same specimen of chyme we can determine, quantitatively, free HCl, organic acids and general acidity. The tropeolin solution used is prepared by throwing into absolute or very strong alcohol an excess of the powder of tropeolin 00 and leaving it stand for two or three days, shaking it up a few times. It is a dark cherry-red color, resembling tincture of iodin. To 5 c.c. of filtered chyme are added two drops of the tropeolin solution. If free HCl is present the stomach contents are colored a purplish-red, the intensity depending on the quantity of HCl. The further technic is shown. His summary is given as follows:

I want to reassert that, while dimethyl reacts very sharply on free mineral acids, it also reacts on other very weak acids; it reacts on such degrees of aciditles of acids other than hydrochloric acid as are absolutely within the bounds of even a subacid stomach. That the supersaturated alcoholic solution of tropeolin 00 stands in no way behind the reagents of Günzburg and Boas, but that it has the additional advantage over these, inasmuch as it can be used for titration, and this with absolute precision. That both free hydrochloric acid and organic acids very, very often exist simultaneously, in the same chyme; that the presence of free hydrochloric acid does not negate the additional presence of organic acids, but that the presence of relatively large quantities of organic acids are abnormal and produce symptoms; that the presence of relatively large quantities of organic acids, either introduced into or formed within the stomach, gives the symptom-complex described by me as "Organacidia Gastrica" [See THE JOURNAL, Sept. 20, 1902, page 719]. That the presence of organic acids can and should be tested for by my direct method—described by me as the floating test—a test very easily carried out in about a minute or two. That free hydrochloric acid, organic acid and the general acidity can be determined (and this has always been done by me) in one and the same specimen, thus enabling us to work with very small quantities and also to save time.

The floating test above alluded to consists in taking 1 c.c. of filtered chyme and 1 c.c. of ether and shaking them up to extract the organic acid. One drop of a 10 per cent. solution of the ferrichlorid is added to 2 c.c. of distilled water in a narrow test tube and on it is floated the clear ether extract. At the plane of junction of the ether with the iron solution a colored ring appears which varies with the different acids, as described in his original article. Care should be taken that only the clear ether extract is floated.

30. **Precipitins.**—Ewing and Strauss' article is continued. In this issue they give mainly the method and technic.

St. Louis Medical Review.

November 14.

31 A Case of Amebic Dysentery. R. M. Funkhouser.

Cincinnati Lancet-Clinic.

November 14.

32 Constipation. Frank L. Rattermann.
33 Carcinoma of the Breast. George J. Monroe.
34 Surgery of the Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

Medicine, Detroit, Mich.

November.

35 *Should a Tuberculous Lung Be "Exercised"? Norman Bridge.
36 *Buccal Expressions of Constitutional States. Eugene S. Talbot.
37 *Neuroses of the Stomach and Intestines. Frank P. Norbury.
38 A Contribution to the Technic of Embryotomy as Applied in Transverse Dystocia. L. A. Hering.
39 *The Early Diagnosis of Mental Diseases. C. B. Burr.
40 *On the Mortality Due to Congenital Malformations, with Especial Reference to the Problem of the Relative Variability of the Sexes. Raymond Pearl.
41 Epidemic Influenza—A Historical Sketch. Q. W. Hunter.

35. **Should the Tuberculous Lung Be "Exercised"?**—Bridge argues against lung gymnastics in tuberculosis, claiming that quiescence of the diseased lung is desirable for the sake of its healing. He thinks it is impossible to demonstrate benefit from lung gymnastics in tuberculosis.

36. **Buccal Expressions of Constitutional States.**—The conditions noted by Talbot are pyorrhea alveolaris, dental caries, gingivitis, etc., that occur in connection with diabetes and other conditions. The condition of the mouth is an index of the general health. The toxins generated in the mouth rapidly pass into the general system and also produce their bad effects in that way. Neurasthenia may entail a predisposition to interstitial gingivitis, as he has shown, and it in turn aggravates the original condition.

37.—See abstract in THE JOURNAL of October 24, p. 1041.

39.—Ibid.

40. **Congenital Malformations.**—Pearl has studied the mortality returns of the last Census for the sake of determining the fact as to the frequency of congenital malformations in the two sexes, and draws the following conclusions:

1. The mean age at death from fatal congenital malformations of the sorts included under title No. 150, of the International Classification of Causes of Death, is essentially the same in men and women. Hence it may safely be concluded that the mean intensity or degree of the malformations is not essentially greater in one sex than in the other. 2. The variations in the age at death from such malformations, as measured by the standard deviation and the coefficient of variation, is significantly greater in women than in men, and hence we may conclude that in intensity or degree of the malformations woman is more variable than man.

He thinks it is impossible to formulate any general rule that either sex is more variable than the other in the human species.

Journal of the Michigan State Medical Society, Detroit.

November.

42 *Conditions that Influence the Use of the *X*-ray in the Treatment of Epithelioma and Other Skin Lesions. Wm. F. Breakey.
43 *The Treatment of the Hypertrophies of the Lymphoid Ring. B. R. Shurly.
44 *Movable Kidney. J. A. Attridge.
45 Report of Seven Rare Abdominal Sections. I. N. Brainerd.
46 *Surgical Treatment of Fractured Spine, with Report of Four Cases. C. Harvey Rodl.
47 *The Effect of Anesthesia on the Body Temperature. W. H. Morley.
48 Congenital Dislocations of the Hip Reduced by Forceful Manipulations. Angus McLean.

42. **The X-Ray.**—Breakey believes that the use of the *x*-ray is specially indicated in malignant disease where excision is impracticable. It should be employed after thorough curetting and removal of all crusted masses and of epitheliomatous growth on the floor of the ulcer and under the everted roll of border of rodent ulcer and all unhealthy granulations. This can be done under cocain anesthesia. Then after checking all hemorrhage and the application of a suitable chemical cautery, for which he usually prefers nitric, carbolic or pyrogallic acid, and the separation of the slight slough and beginning of granulation, the time has come when the conditions are most favorable for the therapeutic action of the *x*-ray. The occasional repetition of slight curetting or cauterization may be required. The use of the ray does not exclude other appropriate treatment.

43. **Adenoids.**—Hypertrophies of the "lymphoid ring," the faucial, pharyngeal and lingual tonsils, are considered by Shurly as causes of a large amount of the pathologic conditions and as entering points for infections. Chronic inflammations of these lymphoid tissues are of several varieties, such as the chronic lacunar, caseous or follicular inflammation of some authors, the chronic parenchymatous or the familiar enlarged tonsils. Polypoid hypertrophy is comparatively rare. There are many enlarged tonsils that are normal in structure and require no attention. Palliative methods, he thinks, as a rule, should be discouraged. Internal medication in the form of iodid of iron and hypophosphites is often exceedingly valuable. The question of hemorrhage must influence our choice of method and, therefore, the snare operation has many advocates. Sometimes ligation of the external carotid is re-

quired to stop the hemorrhage after other means of control have failed. The choice of the anesthetic is important. Nitrous oxid is usually enough, but may be supplemented by ether if necessary. Cocain infiltration is often very useful in office work. Objection to removal of the tonsils is sometimes made because singing teachers say it ruins the voice, and the laity believe this. Their complete removal may be followed by a temporary loss of the singing voice, especially several notes of the upper register, but this is due to the changed muscular movement of the pharynx. Where the operation is successfully performed and no ragged surfaces remain ,the voice is restored. Enlarged tonsils cause vocal fatigue and acute inflammation. He speaks well of the general plan of clearing out adenoid vegetation of the pharyngeal tonsil, and insists in conclusion on the danger that these structures involve as regard the development of infectious disease, diphtheria, scarlet fever, etc.

44. **Floating Kidney.**—Attridge describes the condition and its treatment, and concludes that nephropexy has not generally met with favor because of the number of relapses which are due to insufficient fibrous union between the kidney and the lumbar muscle. Further, that Edebohls' operation produces as nearly perfect results as is possible by any other method known to the writer.

46. **Fractured Spine.**—This article was noticed editorially last week. Rodi says considering the hopelessness of spinal fractures, almost any risk is justifiable, and we should operate in every case, seeing that we may possibly do some good and certainly, if proper antiseptic precautions be taken, we can do no harm. When traumatism of the spine is associated with paraplegia an operation is indicated to determine whether the paralysis is not due to bony pressure incapable of spontaneous relief. The operation should be deferred no longer than the recovery from the original shock demands. The earlier it is done the easier it is to reduce displacements and remove the broken pieces of bone.

47. **Anesthesia.**—Morley has investigated the effect of anesthesia on the body temperature, and gives the results of temperature studies of 46 patients operated on, showing the curves. From his study of previous work and his own observations he concludes that ether anesthesia lowers the body temperature on account of the increased heat output through the dilated vessels and the lessened heat produced from diminished muscular action. Stringent precautions are required to keep the body from losing heat during the operation by having the patient well protected with lint and bandages and by having a warm operating room. Many of the so-called post-operative pneumonias are due to the chilling the patient gets under anesthesia.

Ophthalmic Record, Chicago.

October.

49 *Idiopathic Myositis Involving the Extraocular Muscles. J. E. Gleason.
50 A New Chloroform Inhaler. P. A. Jordan.
51 *The Correct Use of Terms in Ophthalmology. W. N. Suter.
52 An Unusual Case of Ptosis. L. A. W. Alleman.
53 A Case of Ossification of the Choroid and Vitreous. Frank Allport.
54 A Case of Vernal Conjunctivitis. Frank Allport.
55 Some Forms of Irregular Astigmatism; Their Detection and Correction. F. B. Eaton.
56 Case of Traumatic Ptosis of the Left Eye Operated on with Most Satisfactory Result According to the Method of Dr. Gruening or Gillet de Grandmont. W. B. Marple.
57 Papilloma of the Cornea. David H. Coover.

49. **Idiopathic Myositis of the Extraocular Muscles.**—In the case here reported by Gleason there was an acute idiopathic interstitial myositis of the superior rectus which produced exophthalmos and irritation demanding enucleation of the eye. An examination showed that this muscle alone was involved, and the only cause that could be determined was rheumatism. The case is of interest as showing that idiopathic myositis may occur in the ocular muscles.

51. **Ophthalmologic Terms.**—Suter disagrees with Suker (see JOURNAL, September 26, p. 811) as to the use of the terms anisometropia and antimetropia, as well as those of brachymetropia, hypometropia and myopia.

Journal of Cutaneous Diseases, New York.

November.

58 *Paludides: with the Histo-Pathology of a Case of Malarial Purpura. Martin F. Engman.
59 Multiple Angiomata. Abner Post.
60 A Case of Creeping Eruption (Lee), Larva Migrans (Crocker), Hyponomoderma (Kaposi). Henry W. Stelwagon.

58. **Paludides.**—This term, borrowed from the French, is used by Engman to designate the eruptions associated with malaria, among the more frequent of which is herpes simplex. He thinks the herpetic lesions from this cause are more severe and painful than from others. The febrile form with general malarial symptoms is familiar to every one. The non-febrile type is especially noted. Herpes zoster has often been associated with malaria in connection with pompholix, which he considers a vasomotor disturbance of toxic origin. Urticaria is, according to Thayer and others, the most frequent eruption in malaria, and there are three types: that accompanying the malarial paroxysm and usually appearing during the febrile stage; that replacing the chill, the other features of the paroxysm remaining; that taking the place of not only the chill but of the entire paroxysm. The latter class is the one most frequently seen by the dermatologist. There is nothing peculiar or characteristic about this except its periodicity and evanescence. Erythema multiforme has been observed by Engman, and other authors have also noticed similar cases. Malarial infection is often complicated by kidney lesions and albuminuria with casts which, when an eruption is present, may lead to an erroneous diagnosis of both the skin lesions and underlying condition. Several of Engman's cases have had a marked nephritis which cleared up under antipaludal treatment. Eczema in its different forms is noticed. Purpuric eruptions, while rare, are sometimes observed. His own experience with them is limited to 2 cases which he reports. Ulceration and gangrene of the skin, associated with malaria, particularly of the estivo-autumnal type, have been reported by several authorities besides the author.

Buffalo Medical Journal.

November.

61 Our Relations to a Few of the Problems in State Medicine. John L. Heffron.
62 Bilateral Abductor Paralysis of the Larynx. Adolph H. Urban.
63 Diagnostic Palpation of Prolapse of the Kidney and Method of Fixation. Augustin H. Goelet.
64 Gastrojejunostomy for Pyloric Obstruction. William S. Cheesman.
65 *Squint and Its Modern Treatment. F. Park Lewis.

65. **Squint.**—Lewis argues for the early recognition and correction of squint and the use of glasses as soon as they can be worn. Fusion training should be at once employed under the direction of the surgeon to correct incipient amblyopia before the defect becomes fixed. Surgical intervention should be undertaken as soon as its necessity becomes established, and should consist of tenotomy or advancement, or both, at such time as will permit of perfect fusion if the correction by glasses and training does not suffice.

American Journal of the Medical Sciences, Philadelphia.

November.

66 Report of a Case of Sarcomatosis Cutis, Together with an Analytical Study of Fifty Other Cases Collected from the Recent Literature. J. C. Wilson and Frederick J. Kalteyer.
67 *Uncinariasis in Texas. Allen J. Smith.
68 *The Occurrence of Uncinariasis (Ankylostomiasis) in Soldiers of the United States Army. Charles F. Craig.
69 *Tuberculosis of the Tonsils and the Tonsils as a Portal of Tubercular Infection. Henry Koplik.
70 *The Etiology of Nasal Polypi, with Especial Reference to Their Association with Other Pathological Conditions. Francis R. Packard.
71 *Hypertrophic Tuberculosis of the Larynx. Clement F. Theisen.
72 Obstruction of the Bowels and Peritonitis Due to a Strangulated Meckel Diverticulum. John H. Gibbon.
73 Two Cases of Retroperitoneal Hernia. Louis J. Mitchell.
74 Splenic Anemia. A Report of Three Cases. J. A. Scott.
75 Spondylitis Deformans. John Ruhrah.
76 A Case of Osteitis Deformans, with Heart Complications. Charles J. Foote.
77 A Case of Aneurism of the Innominate Artery; Ligation of the Right Common Carotid and Subclavian Arteries. Followed by Secondary Hemorrhage and Death. John G. Sheldon.
78 An Improved Form of Stethoscope. Henry E. Wetherill.
79 The Fermentation Theory of Infection and Immunity. J. W. McLaughlin.

67. **Uncinariasis in Texas.**—Smith reports cases as he has observed them in students and gives a history of the disease since its discovery in this country.

68. **Uncinariasis in the United States Army.**—The same subject is taken up by Craig, who reports his military cases and analyzes the symptoms. He thinks the most important means of infection is by swallowing the worms, but attributes considerable importance to infection through the skin.

69. **Tuberculosis of the Tonsils.**—Cases are reported by Koplik illustrating infection of the tonsils by tubercle germs, showing that the tonsil is a seat of primary tuberculosis, though rarely as compared to the pyogenic forms of infection. The tubercular tissue appears in the form of giant cells and tubercular nodules; cheesy degeneration is not common. It is exceptional to find the tubercle bacilli abundant. Tubercular ulcerations are rare; as a rule, the lymph nodes leading from the tonsil are affected. Some of these tonsillar affections have been preceded by a simple catarrhal or diphtherial inflammation, and the tonsillar infection may be the source of the general tuberculosis. As far as tuberculosis of the cervical lymph nodes is concerned, when found isolated and of a primary nature, it can be justifiably claimed that the infection proceeded from the tonsil.

70. **Nasal Polypi.**—Packard found from his studies that nasal polypi are probably symptoms of underlying conditions, not tumors; that they are based on the existence of diseased bone, and if the latter is removed they do not reappear.

71. **Laryngeal Tuberculosis.**—The form of hypertrophic or hyperplastic laryngeal tuberculosis, of which a case is reported by Theisen, is considered by him as a distinct and unusual form of the disease. As a rule, there is no ulceration, but there may be some occurring later. It may be present at the same time as the hyperplasia of the tissues in some part of the larynx, but the characteristic circumscribed hypertrophies and tumor formations do not break down. It is practically always secondary to the pulmonary involvement, though there appears some evidence that it may occur as a primary affection.

Clinical Review, Chicago.

November.

80 Clinical Lectures on the Etiology, Pathology, Diagnosis and Treatment of Tumors. A. Hamilton Levings.
81 Skiascopy in Refraction. F. W. Kettlestrings.
82 *On the Therapeutic Value of Bloodletting with a Report of Cases. G. B. Hassin.

82. **Blood-Letting.**—Hassin refers to the teachings of Botkin and Zakharin as regards blood-letting, pointing out where it may be of value as a revulsive measure. He considers Reyburn's paper in THE JOURNAL of June 6, 1903, as an important article on a subject which he thinks is too much neglected in modern practice. He reports 3 cases which illustrate the great value of venesection in the relief of hemorrhoids with periodic bleeding, in cerebral congestion and in a complication of symptoms associated with hemorrhoids which he diagnosed as hyperemia of the spinal meninges. He remarks that in Russia even at the present time there are people who are accustomed to being periodically bled by barbers and others.

The Physician and Surgeon, Detroit and Ann Arbor.

September.

83 *The Most Rational Method of Operation for Hemorrhoids. Emil Ries.
84 *The Dispensing Problem. Walter J. Wilson, Jr.
85 A Daily Study of Foods Producing or Not Producing Casts, Fatty Epithelia and Albumin in Urine. (Continued.) Ephraim Cutter.

83. **Hemorrhoids.**—The operation by the clamp and cautery is criticised by Ries as being imperfect and tedious, painful and predisposing to infection. The ideal method should lead to primary union, be applicable in all combinations of hemorrhoids, should preserve the natural configuration and function, and insure quick and safe recovery with little or no pain. The only method which meets all these indications in his opinion is excision and suture of hemorrhoids, not the Whitehead operation, but cutting out of the hemorrhoid in the longitudinal axis of the intestine and sewing it up with continuous catgut suture. He has used the method for external and internal piles, in all combinations, and there has been no difficulty in taking care of the inflamed as well as the non-inflamed piles. The line of excision and suture being always in the long axis of the bowel, there is no danger of subsequent stricture. The amount of mucous membrane and skin to be removed is absolutely under the control of the operator, and the shape and configuration of the anus can be perfectly preserved. A safe and quick recovery and absence of pain are proved by his description of the cases. He keeps the patient on a light diet and advises him to be careful as to sitting down; moves the bowels on the third morning after the operation and keeps up the regular bowel movements afterwards at least every second day. When the patient leaves on the sixth or seventh day he is instructed to see that the bowels move once a day, to take two tub-baths a day for one week and one bath a day after that, and to use wet cotton or a bath for toilet purposes instead of paper. He says whoever gives this method a fair trial can see to his own and his patient's pleasant surprise how well it works.

84. **The Dispensing Problem.**—The conclusions reached by Wilson are that physicians should prescribe nothing which they do not thoroughly know. The prescription should be put up by a qualified pharmacist who makes a specialty of such work. There should be an understanding between physicians and pharmacists that no repetition of prescriptions is permissible without the consent of the physician. A pharmacist should be found who does not sell patent medicines or at least does not push them, and who as far as possible keeps them out of sight. The pharmacists and physicians of every locality should have a joint meeting of their respective societies at least once a year to exchange ideas, and there should be a uniform practice regarding the dispensing of prescriptions.

New Orleans Medical Journal.

November.

86 *Apomorphin Hydrochlorate and Its Use as a Sedative and Hypnotic in Acute Alcoholism, with Report of Cases. Paul E. Bechet.
87 Reports of Cases of, 1, Parasites in the Nasal Cavity; 2, Cockleburr in the Naso-pharynx of a Ten Month-Old Child; 3, a Case of Anophthalmos. Oscar Dowling.
88 Hemophilia Complicated by Attacks of Multiform Erythema of the Hemorrhagic Type. T. H. Young.

86. **Apomorphin.**—A number of cases are reported by Bechet, who finds that strychnin counteracts the heart depression and the depression of respiration which follows the use of apomorphin in frequent doses, but that apomorphin acts as well in delirium tremens as in the other conditions of alcoholism, and is indicated in combating such a condition. It is better to begin with a small dose, about 1/30 gr. and increase it if necessary. In his case 1/15 gr. was the largest dose required.

Medical Review of Reviews, New York.

October 25.

89 *Food Adulteration: Its Nature and Extent, and How to Deal with It. Willis G. Tucker.

89. **Food Adulteration.**—Tucker, the director of the Bureau of Charity, New York State Department of Health, calls attention to the fact that food adulteration is not necessarily food poisoning. Much of the adulterated food is innocuous, and he goes over the various preparations pointing out that the great majority are fairly free from dangerous adulterants. Milk is often watered and preservatives added. Butter and cheese have been manipulated and sophisticated, but many of these evils have been checked. Canned goods are often poor in quality and preservatives have been used, but they are not necessarily bad from a sanitary point of view. He thinks that in this matter there is a disposition to respect the laws. Sophistication he thinks is little met with in the cereal foods, though some special foods like gluten breads and flour are not what they are claimed. Fresh vegetables and fruits are often sold in an unripe and rotten state, but that it not exactly adulteration. Sugars are generally pure. Jams, jellies and marmalades are often fictitious mixtures compounded with glucose, gelatin and artificial flavors, but not always necessarily unwholesome, and the purchaser can generally tell what he is getting. Tea and coffee are fairly pure. Chicory is often added to ground coffee, but generally in response to a demand rather than as an adulterant. When sold unground,

coffee is reliable. Spices, however, are quite generally adulterated. While the substances employed are usually harmless the practice is one that should not be condoned. Flavoring extracts are also adulterated, as are olive oil, vinegar, etc., but he says it is immaterial whether the vinegar used is made from cider, malt or whiskey. The dilute acetic acid of the U. S. P. containing 6 per cent. of absolute acid would perhaps be preferable to anything else, and Dr. Squibb once informed him that he used it in preference to vinegar on his own table. He mentions at some length the adulteration of liquors, and in conclusion makes some suggestions in regard to legislation. He thinks unnecessary legislation should be discouraged. We should set our own standards. We should endeavor to define articles precisely in framing food laws, and prescribe definite standards of quality or purity. This may be difficult, but often is quite practicable. There are very few articles employed in foods which should be absolutely prohibited; for example, he does not think the use of boric, benzoic and salicylic acid should be prohibited, but the articles in which they are employed should be labeled and the facts stated. The proper and honest labeling of all foods should be demanded and encouraged by the law. He thinks there is much more commercial honesty in the world than was formerly the case, and things are better than they were.

American Gynecology, New York.

October.

90 *Tuberculosis of the Vaginal Portion and of the Uterus, with the Report of a Case. Hiram N. Vineberg.
91 A Sketch of the History of Obstetrics in the United States up to 1860. (Continued.) J. Whitridge Williams.
92 *Thrombosis of the Femoral Veins Following Aseptic Laparotomy. E. R. Secord.
93 *A New Treatment of Dysmenorrhea. Emil Ries.
94 Report of Three Cases of Intussusception in Children. R. E. Skeel.

90. **Tuberculosis of the Uterus.**—Tuberculosis of the uterus is not uncommon, but is most frequently confined to the body of the uterus. When it appears in the cervix it occurs in several forms; in the form of a cauliflower growth showing a tendency to bleed, which is frequently mistaken for carcinoma but is less friable. The absence of the finger-like lesions characteristic of carcinoma will help to distinguish it. Microscopic examination will decide the diagnosis. In the ulcerative form the ulceration is usually well defined with sharp, undermined edges, and the surrounding tissue may be normal or studded with miliary tubercles. The ulceration may be covered with grayish exudate of broken-down caseous material, as in the case here reported by Vineberg. The diagnosis was reached by him by exclusion, and was not shaken by the report that no tubercle bacilli were found in the exudate. Microscopic examination of fragments of the tissue confirmed the diagnosis. The vaginal portion in the third form is studded with miliary tubercles, as may also be the cervical mucosa, and tubercles may penetrate the whole surface of the cervical wall (Vassmer). This form is easy of diagnosis. Lastly, the tuberculous portion may be localized to the superficial epithelium of the glands, the latter being filled with masses containing numerous tubercle bacilli. This is the bacillary catarrh described by Schütt. In the great majority of cases the cervical disease is secondary to disease higher up, and the treatment will be subsidiary to the treatment of other lesions. In primary disease of the cervix, amputation may be all that is required, as in the case reported by Frank. Vineberg thinks that more cases of cervical tuberculosis will be observed as the attention of the profession is more directed to the subject.

92. **Thrombosis of the Femoral Vein Following Laparotomy.**—From a study of the literature and of the case here reported, Secord concludes that no single etiologic factor is alone responsible for the occurrence of this complication, and that the rôle of infection in otherwise non-infective cases does not appear to be of chief importance. The conditions of sudden decrease of pressure depending on the operation probably have an active influence. The treatment should be prophylactic, avoiding unnecessary injury, hemorrhage, or sudden decrease in tension, and having the wound area supported by firmly applied dressings. As far as he has been aware, there has been no mortality in the cases but the occurrence of pulmonary embolism in some warns us that a fatal termination is not impossible.

93. **Dysmenorrhea.**—Ries calls attention to the suggestions of Fliess as to the genital spots in the nose and their local treatment by cocain as a relief for dysmenorrhea. He thinks it would be advisable to make a series of experiments to determine the nodus and the value of the treatment: 1. Use the method according to Fliess, that is, touching up the genital spots; 2, the use of cocain in the pharynx; 3, the use of cocain on the areas outside the genital areas in the nose; 4, the use of some astringent solution instead of cocain, and 5, the use of plain water at body temperature. Of course, the patient must be ignorant of what solution is being used. He suggests, however, a suspicion as to one point, that is, the possible encouragement of the cocain habit, and asks for testimony of whose who have had chances of observation, as to whether this habit has been thus aroused or whether cocain habitués ever suffer severely from the dysmenorrhea without relief from the cocain habit.

International Journal of Surgery, New York.

November.

95 *Diagnosis and Treatment of Injuries to the Spine. W. J. Means.
96 On Opening of the Pouch of Douglas and Separation of the Bladder from the Uterus. James H. Burtenshaw.
97 The Treatment of Prolapsus of the Uterus. Harvey P. Jack.
98 The Surgical Assistant. (Continued.) Walter M. Brickner.
99 A Unique Case of Hydrosalpinx. A. Palmer Dudley.

95. **Injuries of the Spine.**—Means reports a number of cases and sums up his conclusions that all spinal injuries, no matter how slight, should be carefully examined at first sight, and owing to the frequency of secondary developments a guarded prognosis should be given. There are no positive signs of complete severance of the cord in the primary stage of an accident. The treatment of spinal injuries other than operative consists, first, in rest in the horizontal position, application of cold, attention to the bladder and rectum, and, second, in massage, galvanism and stimulating solutions. Laminectomy performed after reaction from shock is not dangerous, and is the only rational treatment for pressure on the cord from a blood clot or a bone depression. Relief may often follow operation several months after the inception of injury.

Medical Standard, Chicago.

November.

100 The History of Nephritis. Arthur R. Elliott.
101 The Mechanism of the Accommodation of the Eye. J. F. Burkholder.
102 *Venesection; Its Use and Abuse. C. F. Wahrer.
103 Some Cases of Venereal Disease. Alexander Memelsdorf.
104 *"Physiological Aspects of the Liquor Problem"—A Criticism. Lawrence Irwell.
105 The So-called Antiseptic Treatment of Typhoid Fever. James G. Mastin.
106 Perineuritis of the Spinal Nerves. A. W. Baer.

102. **Venesection.**—Wahrer considers that venesection has its value and that those who are not afraid to face popular prejudice against it will meet with success when they employ it in properly selected cases. He reports a number of cases showing its utility. Certain cases, such as pneumonia, reflex hepatitis, congestive headaches, cerebral congestion, etc., are favorable for this treatment. He also mentions that in uterine congestion it is frequently useful as an adjunct. In dilated right heart and pulmonary congestion, eclampsia with high arterial tension, pulmonary emphysema and some cases of thoracic aneurism, iritis of the plethoric, in uremia with acute renal congestion, and especially maniacal uremia, as well as in the acute nephrites of the robust, bleeding is almost always useful. It is also of value sometimes in stout people in reducing a dislocation and rendering it possible when otherwise impracticable. Its action, he thinks, is chiefly mechanical. It should not be used as a routine measure, but its indications depend on the knowledge of the pathologic processes present.

104. **The Liquor Problem.**—The report of the committee of fifty on the physiologic aspects of the liquor problem, which has been noticed elsewhere, is severely criticised by Irwell. He accuses the compilers of using an antiquated authority because it specially emphasizes the food value of alcohol. He also criticises Dr. Atwater's work, which he thinks is

based on his "fad" of accepting oxidation as a test of food value. He considers the W. C. T. U. methods condemnable, but that does not excuse the method of handling the subject by the committee of fifty.

Medical Fortnightly, St. Louis.

November 10.

107 *Neuroses of the Stomach and Intestines. Frank Parsons Norbury.
108 The Card System in Medical Practice. Carl E. Black.

107.—See abstract in THE JOURNAL of October 24, p. 1041.

Northwestern Lancet, Minneapolis.

November 1.

109 Syphilis. John Sutherland.
110 A Case of Leukemia. C. H. Bradley.
111 Atypical Forms of Mastoid Disease. H. McI. Morton.
112 Iodipin. J. T. Moore.

Kansas City Medical Index-Lancet.

November.

113 Address, Jackson County Medical Society. W. S. Wheeler.
114 Electro-cautery Incision for Ectropion and Entropion. Flavel B. Tiffany.
115 Report of Cases, Appendicitis, etc. Thomas J. Beattie.
116 Treatment of Acute Bronchitis in Infants. J. B. Norman.
117 The Fundus Oculi in Hereditary Syphilis. J. W. Sherer.
118 Surgery of the Thyroid. (To be continued.) Benjamin M. Ricketts.

Canada Lancet, Toronto.

November.

119 *Inaugural Lecture, New Medical Building, Toronto. Charles S. Sherrington.
120 *The Master-word in Medicine. Wm. Osler.
121 An Address on Receiving the Degree of LL.D. (Honoris Causa) from the University of Toronto, October 2. W. W. Keen.
122 The Technic of Gastro-enterostomy. Theodore A. McGraw.
123 Conservative Gynecology. A. Lapthorn Smith.
124 *The Cardiac Complications of Influenza. E. G. Wood.
125 The Relation Between the General Practitioner and the Specialist in Regard to the Treatment of Intra-nasal Disease. J. Price-Brown.
126 A Provincial Sanatorium for Manitoba. J. O. Todd.

119.—This article appeared elsewhere. See THE JOURNAL of November 14, title 107, p. 1233.

120.—Ibid., November 21, title 127, p. 1303.

124.—See abstract in THE JOURNAL of September 12, p. 680.

Providence Medical Journal.

November.

127 Tent Life for Consumptives in Rhode Island. A Brief History of Pine Ridge Camp; Its Inception, Achievements and Plans. Henry B. Potter.
128 Electricity as a Therapeutic Agent. Marcus F. Wheatland.
129 Exclusive Milk Diet in the Treatment of Disease. Max B. Gomberg.
130 Rupture of the Uterus. G. Edward Buxton.

Merck's Archives, New York.

November.

131 Aconitum Napellus. W. H. Blake.
132 Pain in the Heart. G. Miller.
133 Syphilis and Scrofula. S. D. Warnock.
134 An Index of Diseases Alphabetically Arranged with Their Modern Treatment. (Continued.) G. Bjorkman.

Memphis Medical Monthly.

November.

135 *Masked Epilepsy. W. B. Fletcher.
136 Some Notes on Melancholia and Mania, with Differential Diagnosis. Ernest W. H. Booker.
137 Some Medical Notes of a European Trip. E. C. Ellett.
138 Delayed Secondary Hemorrhage Following Tonsillectomy. Report of Two Cases. Richmond McKinney.
139 The Etiology of Eclampsia. William A. Sim.
140 Pneumonia. W. S. Robinson.
141 A New Tonsil Forceps. Richmond McKinney.

135.—See abstract in THE JOURNAL of October 24, p. 1041.

Denver Medical Times.

November.

142 Causes of Epigastric Pain. J. N. Hall.
143 Pyloric Obstruction. A. C. Behle.
144 The Importance of More Careful Rectal Examination, and the Value of Proctoscopic Examination in Proctitis. Fred P. Tuxbury.
145 The Deleterious Effects of the Excessive Use of Salt—Chlorid of Sodium. (Continued.) W. B. Parsons.

Medical Summary, Philadelphia.

November.

146 Rheumatism in Children. Ira A. Marshall.
147 Exercise. J. L. Wolfe.
148 Neurasthenia Versus Spinal Irritation. F. B. Brubaker.
149 Rational Aphrodisiac Treatment. W. C. Buckley.
150 Linen and Woolen Underwear. N. B. Shade.
151 Abortion—Hemorrhage. J. S. Leachman.
152 The Rational Treatment for Tuberculosis. L. G. Doane.
153 Hemorrhoids and Their Treatment. W. B. Wood.
154 The Treatment of Dyspepsia. L. Bennett.
155 A Chat with the Brotherhood. Luigi G. Doane.

Fort Wayne Medical Journal-Magazine.

October.

156 Some Points Concerning Arteriosclerosis. B. Van Sweringen.
157 Strapping the Breasts; Is It Right? H. V. Sweringen.
158 Biliary Obstruction as a Cause of Nephritis. Miles F. Porter.

Oklahoma Medical News-Journal, Oklahoma City.

November.

159 The Modern Non-surgical Treatment of Abscesses. William F. Waugh.

American Journal of Obstetrics, New York.

November.

160 *Address, American Association of Obstetricians and Gynecologists. L. H. Dunning.
161 *Relationship of the Colon to Abdominal Tumors. James F. Baldwin.
162 *The Value of Vaginal Cesarean Section, with Report of Two Cases. M. Stamm.
163 *The Limitations of Cesarean Section. E. Gustav Zinke.
164 *The Gilliam Operation: A Clinical Contribution. Edward J. Ill.
165 *Analysis of Common Causes of Death Following Pelvic and Abdominal Operations. Joseph Price.
166 *Report of a Fourth Consecutive Successful Operation for Acute Perforated Gastric Ulcer, with General Infection of the Peritoneal Cavity. H. Howitt.
167 *Should the Uterus and Ovaries Be Removed in Operating for Double Pyosalpinx? Carlton C. Frederick.
168 *The Indications and Technic of Vaginal Drainage for Suppuration in the Pelvis. A. Goldspohn.
169 *Shortening the Round Ligaments by the Blunt-hook Method, with Report of Cases. H. W. Longyear.
170 In Memoriam: William E. B. Davis. L. S. McMurtry.
171 *The Rational Treatment of Post-partum Infections of the Uterus. D. Tod Gilliam.
172 *Penetrating and Perforating Gunshot and Stab Wounds of the Abdomen, with Report of Cases. John Young Brown.
173 *Infantile Uterus, Scanty Menstruation, Amenorrhea and Dysmenorrhea Cured by Stem Pessaries. J. H. Carstens.
174 Surgery of the Ileocecal Valve for Non-malignant Disease. N. Stone Scott.

160.—See abstract in THE JOURNAL of October 17, p. 979.

161, 162, 163, 164, 165.—Ibid., October 3, pp. 871 and 872.

166, 167, 168.—Ibid., October 10, p. 924.

169, 171.—Ibid., October 17, p. 979.

172. **Abdominal Wounds.**—Brown advocates prompt operative interference in these cases, notwithstanding the unfavorable experience in military surgery. At the St. Louis City Hospital the practice is to immediately prepare for laparotomy, enlarge the wound of entrance, and track the bullet with the sterile finger. The probe is never used except to complete investigation. Brown has repeatedly seen symptoms point to perforation, and has not found it on operation, and vice versa. There is only one safe course. The hydrogen gas test of Senn he considers not safe, as when it is used in case of perforation fecal extravasation is bound to occur. The extent of injury done by a bullet can never be determined until the abdominal contents have been thoroughly gone over. In stab wounds the location of the wound should govern us, both as regards the length and situation of the abdominal opening. The importance of a systematic search is emphasized, as to close some perforations and not all would defeat the whole object. Brown is a believer in the virtue of irrigation and drainage in the treatment of wounds of this character. He always uses normal saline solution with a flush tube and the funnel of Price to clean the cavity. The region of the liver, spleen, both iliac regions and pelvis are flushed until the fluid returns clear. This is as a rule done at the completion of the operation. In cases where shock is severe it is his custom to fill the pelvic cavity with salt solution as soon as the abdomen is opened; it is rapidly absorbed, and it is remarkable how quickly the pulse will respond. The greater part of the paper consists of accounts of individual cases.

173.—See abstract in THE JOURNAL, October 17, p. 980.

Medical Times, New York.

November.

175 The Special Qualifications of a Physician as a Life Insurance Examiner. J. T. Pratt.
176 Personal Identity. G. R. Johnson.
177 Pregnancy, Abortion and Infanticide as Related to Medical Jurisprudence. M. E. Fitch.
178 Narcolepsy. Q. W. Hunter.
179 Linguæ Pyramidalis Malariæ. Lucian Lofton.
180 Cerebral Syphilis. George P. Sprague.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

November 7.

1 *Science and Medicine in the Modern University. C. S. Sherrington.
2 *The Master-word in Medicine. William Osler.
3 *Tuberculosis of the Nervous System. E. F. Trevelyan.
4 The Institutional Treatment of Inebriety. W. J. Collins.
5 *The Overlaying of Infants. William W. Westcott.
6 Case of Puerperal Septicemia Treated with Antistreptococcus Serum; Recovery. W. J. Cale.
7 Case of Puerperal Septicemia Treated with Antistreptococcus Serum. Richard Jones.
8 Puerperal Eclampsia Before Delivery. John Lithgow.
9 The Treatment of Eclampsia by Hypodermic Injections of Morphin. W. Boxer Mayne.

1.—This article appeared elsewhere. See THE JOURNAL of November 7, p. 1233.

2.—Ibid., November 21, title 127, p. 1303.

3. **Tuberculosis of the Nervous System.**—Trevelyan's Bradshaw lecture enumerates the following as the principal forms of tuberculosis of the nervous system: Tuberculosis of the dura mater, tuberculous meningitis in its general and limited forms, tuberculous masses in the brain and cord, and possibly miliary tuberculosis of the brain itself. He thinks we can have tuberculous meningitis without the presence of tubercles, but proof is wanted. The limited meningitis described by French authorities consists of thickening with tubercle formation over a limited region, usually the motor cortex. It is said to occur in phthisis. Its symptoms vary from the ordinary tuberculous meningitis. Tuberculous areas in the brain are not infrequent; they were present in 33 of the 114 cases analyzed by him. In 15 they appeared to be but little antecedent to the existing meningitis. They were only seldom multiple, the largest number observed was four. They are usually well defined, shelling out with ease, and show little tendency to break down and still less to calcify. Tubercles of the spinal cord are not uncommon. A thorough examination in these cases almost invariably reveals an older focus somewhere else in the system; in only 6 of the 114 cases was this absent. In these the notes were incomplete. Direct infection through the nose is believed possible, as in Demme's case, and tuberculosis of the ear may extend; but the latter route is indirect, for the ear is usually infected through the lymphatics of the nasopharynx. In 28 of the 114 cases the lungs were normal. It has been proved that tubercle bacilli may pass through the lungs without leaving an obvious recognizable lesion. The joints and hips were affected in 23 cases, and in 4 the kidney was the seat of extensive tuberculous disease. Ordinary tuberculous peritonitis was noted in 8 cases and intestinal ulcer in 28. Records were incomplete as regards the relation of the lymphatics to tuberculous meningitis. Trevelyan remarks that the mobilization of the tubercle bacillus from the infecting focus is one of the puzzling questions. It has been suggested that tuberculin may produce this effect, as in Rutimeyer's case of phthisis, in which tuberculous meningitis appeared after tuberculin treatment, though Cornet denies this. Tuberculous meningitis occurred shortly after operation in 8 out of 114 cases, and the interval between the operation and the meningitis infection reminds one forcibly of the incubation period in experimental tuberculosis. The route by which the bacillus traveled is not worked out. It is either by the blood or lymphatic vessels, and the marked alteration in the blood vessels is a striking fact in connection with tuberculous meningitis. In one case he could see tubercle in the walls of the sylvian arteries. The examination of the spinal fluid is a matter of importance in diagnosis, and while he has never been able to find the tubercle bacilli in the deposit in tuberculous meningitis, inoculation tests gave satisfactory results in three out of four cases. The points of importance in the examination of the spinal fluid are the presence of tubercle bacilli and lymph in the deposit, and the results of inoculation test. Trevelyan regards cryoscopic and permeability tests as of small significance. He thinks his lack of success in finding the tubercle bacillus was accidental. In rare instances one has the good luck to see recovery from symptoms of grave tuberculous disease of the brain, but it is often incomplete, blindness remaining; and in considering recovery from tuberculous meningitis we must distinguish between the general form and the partial meningitis. Monnier and others recommend operation for the latter. Bacteriologic proof of the nature of meningitis has been provided in cases recorded by Freyhan, Henkel, Barth, Gross, Winter and Gohl, the tubercle bacillus being found in the spinal fluid in all these cases. The cases of Henkel and Barth were living and well in 1903. Notwithstanding these recoveries the prognosis, however, must be still considered as generally hopeless, and the prophylaxis is worthy of the closest attention. Trevelyan advises the isolation of consumptives in careless families, especially if children are exposed, and the notification of phthisis and disinfection.

5. **The Overlaying of Infants.**—This seems to be a comparatively common occurrence in England, and Westcott ascribes it largely to intoxication on the part of the parents and thinks that the laws should be more stringent. He says it is now impossible to secure conviction in England for the manslaughter of infants by overlaying.

The Lancet, London.

November 7.

10 Medicine and Science in the Modern University. C. S. Sherrington.
11 Some Observations on Tuberculosis of the Nervous System. E. F. Trevelyan.
12 The Relations of Ophthalmology to General Medicine and Surgery and to Public Health. John Tweedy.
13 *Some Points in the Operative Treatment of Tuberculous Disease of the Knee-joint. K. W. Monsarrat.
14 *The Borderlands of Diphtheria and Scarlet Fever. Hubert E. J. Biss.
15 An Obscure Case of Intestinal Obstruction Due to an Obturator Hernia; Laparotomy; Enterectomy; Death in 27 Hours from Cardiac Syncope and Peritonitis. John R. Lunn.
16 A Case of Retroperitoneal Pelvic Sarcoma. John McLachlan.
17 *On the Value of Aspirin in Acute Rheumatism. Edward Mackey.
18 The Prevention of the Recurrence of Nasal Polypi. Eugene S. Yonge.
19 *On the Nature of Curschmann's Spirals. E. E. Laslett.
20 Notes on a Case of Chronic Ulcer of the Stomach: Excision of Ulcer: Posterior Gastroenterostomy; Cholecystotomy. W. McGregor Young.

13. **Tuberculous Disease of the Knee-Joint.**—Monsarrat insists on the great value of early surgical interference. He gives the symptoms and describes his technic, and says that the indications for operative interference are as follows:

1. Cases of tuberculous foci in the neighborhood of the lower epiphysis of the femur should be operated on as soon as the diagnosis is established. 2. Cases of joint disease by extension from the femur should be operated on as soon as possible if this extension is recent, and if not recent, then when the disease does not definitely retrograde after about two months' fixation of the joint. 3. Cases of primary synovial disease should be operated on when after about three months of rest no distinct improvement has taken place.

14. **Diphtheria and Scarlet Fever.**—The gradations between diphtheria and scarlet fever are noted by Biss, who draws a schematic table of these complications. He claims that the shades of difference between scarlet fever, diphtheria and tonsillitis are so gentle and each grades into the other so much, not at one but at many points, that the diagnostician can seldom feel certain.

17. **Aspirin in Rheumatism.**—The advantages of aspirin in rheumatism are illustrated by cases reported by Mackey, who insists on the importance of using sufficient doses continued sufficiently long if relapses are to be avoided. His practice is to give it in 20-gr. doses or more, sometimes 30 grs., and he would alternate with the alkalies, though he has sometimes combined these with aspirin, notwithstanding the incompatibility that is claimed by some authorities.

19. **Curschmann's Spirals.**—Laslett suggests that Curschmann's spirals are in reality casts of the smaller bronchial branches similar in nature to the casts of true plastic bronchitis. In support of this he raises the following points:

1. Fibrinous casts frequently show spiral terminations; 2. these terminal spirals are practically identical in structure with the true Curschman spirals, also present in the sputum; 3, the spirals, at least in this case, owe their peculiar structure largely to the arrangement of the great number of cells present; and 4, some of the spirals terminate in two equal branches of smaller diameter

than the parent stem. This fact alone makes it difficult or impossible to believe that these structures are formed by a spiral movement.

The Practitioner, London.

November.

21 A Clinical Lecture on Extra uterine Gestation. Halliday Croom.
22 *The Present Position of Our Knowledge with Regard to the Treatment of Uterine Fibroids. Alban H. G. Doran.
23 Complications Met with During and After Ovariotomy. Cuthbert Lockyer.
24 Two Lectures on the Diagnosis of Hysteria. Purves Stewart.
25 *Phthisis in Relation to Life Assurance. T. D. Lister.
26 Diseases of the Respiratory Tract. A Review of Recent Work. J. J. Perkins.
27 The Treatment of Nephritis: Some Recent Suggestions. Thomas J. Horder.
28 Two Obstetric Cases with Comments. W. E. Fothergill.
29 A Note on the Bacteriologic Diagnosis of Diphtheria. George Newman.

22. **Uterine Fibroids.**—Doran says fibroids need no treatment in many cases and quotes Murdoch Cameron that not more than one-third of the cases seen require surgical interference, and many fibroids are never recognized. The course of the fibroid, however, is uncertain; we can tell what a cancerous cervix and an ovarian cyst will do, but a fibroid's course can never be foretold. We must be wary about the opinions of others, however authoritative; a hysterectomy for fibroid may be followed by complications worse than the original trouble, and the impossibility of calculating the future growth of the fibroid is too much in the background with advocates of hysterectomy. The operation is not a slight one; the chances of hernia, intestinal obstruction and infection are always to be considered. The most serious of all possibilities is psychic disturbance. When operation does not seem urgent treatment should be symptomatic; when bleeding is present ergot is not to be despised, except when cardiac disease exists. An abdominal belt to support the tumor anteriorly is always advisable. A light nutritious diet and certain mineral waters are of service. Electricity is not in favor with Doran; the effects he has seen have in some cases been bad. As regards the ovary in hysterectomy, he thinks it is impossible to absolutely extirpate all ovarian tissue, and in many cases an ovary left behind has produced no trouble. The simplest and best operation for supravaginal hysterectomy is the retroperitoneal one; the stump, being placed behind, is under the peritoneum outside its cavity. He has found that his patients do very well when amputation is made through the cervix, and the uterine flap need not be cut long. We should carefully study the history of all patients as regards the possibility of mental disease, and while evidence is in favor of the conservative treatment of the ovary there are some disadvantages. The ovary left may become the seat of a new growth and pieces of the fallopian tube may inflame or even suppurate. The inflamed ovary and tube should be always removed. When it affects both of the appendages the operator should never scruple to remove them. As regards suture, he favors the deep interrupted suture instead of suturing in layers. The statistics of hysterectomy must be judged on their own merits, and should not induce us to operate on every fibroid that comes under our care. He says that in cases where operative interference is most necessary the mortality is still considerable, but they do show that recovery is almost certain if a fibroid of moderate size is removed by an experienced operator. In most cases the patient is in certain respects a gainer by removal.

25. **Phthisis and Life Insurance.**—Lister finds from a study and an analysis of statistics that vulnerability to phthisis is practically the same at all stages of life. The actual danger to insurance companies from phthisis is made up of three factors: inherited vulnerability largely diminished after middle life, acquired vulnerability increasing with age and infection alike at all stages. The sum of these three factors causes the actual danger of phthisis to be about the same at all ages.

Presse Médicale, Paris.

30 (II, No. 86.) *De la polyurie simple aux 2 premières périodes de la paralysie générale. E. Marandon de Montyel.
31 Traitement médicale de l'appendicite algue. G. Lyon.
32 (No. 87.) *Treatment of Syphilis in the Newly Born by Injections of Soluble Mercurial Salts. Schwab and Levy-Bing.—Traitement de la syphilis chez les nouveau-nés par les injections mercurielles solubles.

30. **Polyuria in General Paralysis.**—The conclusions of examination of 54 patients with general paralysis indicate that simple polyuria is an early phenomenon in this affection, appearing before the onset of any other symptom. It was noted in about 16.66 per cent. of the subjects examined, but did not last longer than two months in any case, with one exception, in which it was manifest for five months.

32. **Mercurial Injections for the Newly Born.**—Schwab has treated 5 new-born infants exhibiting unmistakable syphilitic lesions by subcutaneous injections of an aqueous solution of the biniodid of mercury, averaging .5 mgm. of the mercurial salt a day. One infant weighed 3,160 gm. After two weeks of these injections it weighed 3,050, but the syphilitic lesions had commenced to subside, and in two more weeks had entirely disappeared, while the weight had increased to 3,410. A second infant presented generalized pemphigus and coryza, both parents syphilitics. He was treated by mercurial inunctions for six days after birth and then the subcutaneous injections were instituted, each .5 to 1 mgm., a total of 12 injections. The weight increased from 2,230 to 2,850 gm. in 24 days, and the child was in excellent condition, its skin all cleared up. It succumbed a few weeks later to an intercurrent pneumonia, and no syphilitic lesions could be discovered on the skin or internal organs at the necropsy. A third infant was apparently healthy at birth—the mother a confirmed syphilitic—and seemed to thrive well for a few days, when the weight began to markedly decrease. On the assumption that this was due to the syphilitic taint the injections were commenced, and after 9 daily doses of 1 mgm. the condition was again satisfactory and the weight continued its regular increase afterward. Another infant with marked pemphigus was injected with 1 mgm. the very evening of its birth, the injections continued for two weeks, the dose sometimes as large as 1.5 mgm. The results here were equally gratifying. The fifth child was three months old when the injections were commenced. He had been born at the seventh month, both parents victims of comparatively recent syphilis. He seemed to thrive at first, but then gradually declined. Under the injections of 2 mgm. of the biniodid he recuperated, and after 6 injections the improvement was remarkable. The number of injections in these 5 cases ranged from 6 to 16. The bowels were normal, and all the infants increased in weight. The injections were perfectly tolerated in every case. The formula used was .05 gm. mercury biniodid and the same amount of sodium iodid, in 10 c.c. of distilled water.

Semaine Médicale, Paris.

33 (XXIII, No. 43.) *At What Age Do Tabetics Die? P. Marie and P. Mocquot.—A quel age meurent les tabétiques?
34 Report of French Congress of Surgery. (Concluded from No. 42.)
35 (No. 44.) *Medical Instruction in the United States. F. Munch.—Les études médicales aux Etats-Unis.
36 L'accroissement de la population de France comparé à celui des principaux pays d' Europe.

33. **Age at Time of Death in Tabes.**—Marie and Mocquot do not believe that syphilis shortens life in the majority of cases. Their experience with 66 tabetic subjects dying at the Bicêtre during the last few years, demonstrates that tabes likewise does not have much influence on the length of life. They mention that these subjects exhibited no other indications of syphilis, aside from their tabes, sufficiently serious to shorten life. Among 20 blind tabetics 50 per cent. were more than 60 years old at the time of death and 17 were over 50. In the total 66 more than 83 per cent. were over 50 and 51.5 per cent. more than 60. The 7 who died under the age of 45 succumbed to an intercurrent disease or committed suicide. Of the 58 tabetics at present in the hospital more than 43 per cent. are over 55 and nearly 69 per cent. are over 50. The rapidly fatal form of tabes sometimes observed is probably in most cases merely general paralysis with the tabetic symptoms predominant, that is, an acute or subacute general taboparalysis. When tabes reaches a certain stage it seems to become stationary, and long survival in this phase is possible and probable.

35. **Medical Instruction in the United States.**—Munch compares the requirements for admission to our medical colleges and other details with those prevailing in Europe. He states that only one of the 154 medical schools in this country regards the clinic as of sufficient importance to impose a hospital course on the students. This same school is the only one in which the requirements for admission are approximately equivalent to the requirements of a French medical school. It is also the only one in which the number of students is kept down, and it thus answers the purpose of a hotbed for producing professors and scientists. As a rule, he remarks, the practical side of medical instruction here is always sacrificed to the theoretic side. The clinical side is absolutely neglected. He comments on the shortness of the terms, especially when the lack of previous training of the students is considered. Aside from a few schools which are an honor to the country and which may well bear comparison with similar establishments in the old world, there are too many others whose disappearance would add to the success and credit of the country.

Archiv f. klinische Chirurgie, Berlin.

Last indexed page 1054.

37 (LXXI, No. 1.) Origin of Inflammatory Foci in Bones and Their Relation to Ramifications of Arteries in the Bones. Lexer (von Bergmann's clinic, Berlin).—Die Entstehung entzündlicher Knochenherde und ihre Beziehung zu den Arterienverzweigungen der Knochen.

38 Experiences in Operating on Incarcerated Hernia. Weyprecht (Körte's clinic, Berlin).—Erfahrungen über die Operation des eingeklemmten Bruches.

39 *Successful *X*-ray Treatment of Sarcoma in Skull.—Krogius (Helsingfors).—Ueber einen mit Roentgenstrahlen erfolgreich behandelten Fall von Schädelsarkom.

40 *Subcutaneous Rupture of Biliary Passages. Lewerenz (Stettin).—Ueber die subkutanen Rupturen der Gallenwege traumatischen Ursprungs, nebst einem kasuistischen Beitrag.

41 *Zur Kasuistik der akuten Darm-Invaginationen. Barker (London).

42 *Antiseptic Dressings for Wounds. Noetzel (Frankfurt a. M.).—Experimentelle Studie zum antiseptischen Wundverband.

43 Experimentelle Untersuchungen und Erfahrungen über Leitungsanesthesie (Anesthesia by Conduction). Braun (Leipsic).

44 Zur Resektion des Thorax bei veralteten und tuberkulösen Total-Empyem. Ringel (Hamburg).

45 *Die Kardiolysis und ihre Indikationen. Brauer (Heidelberg).

46 Entstehung der Hygrome. Langemak (Rostock).

39. **X-Ray Treatment of Sarcoma in Skull.**—The tumor was the second recurrence of a large round-celled sarcoma of the occiput with metastatic nodules in the frontal bone. Under the *x*-rays all the lesions vanished in the course of two months and the patient has been cured to date, four months since. A hard tube was used, at a distance of 15 to 20 cm., the daily sittings ten minutes each. The hair fell out, but has grown again; no other by-effects were observed.

40. **Rupture of Biliary Passages.**—A boy between 2 and 3 years old was run over by a wagon and was brought to the clinic three weeks later with slight icterus, ascites and clay stools. Puncture allowed the escape of nearly three quarts of a bile-stained fluid. An operation was undertaken seven weeks later and revealed fibrinous peritonitis with numerous adhesions. The hole in the biliary passages was not discovered, but complete cure followed the establishment of an anastomosis between the gall bladder and duodenum. Lewerentz reviews 60 similar cases that have been published. When the bile escapes into the abdominal cavity in large quantities a fatal termination is inevitable partly on account of absorption of the constituents of the bile and partly from the loss of this important factor in digestion.

41. **Acute Invagination.**—Barker has operated on 25 cases and has had 7 deaths. He never attempts to correct the invagination by high injections, except in the very earliest stages. The invagination should never be reduced by traction on the invaginatum but only by pressure on the peripheral end, squeezing the intussusceptum out of its sheath.

42. **Antiseptic Dressings.**—Noetzel's experimental research indicates that the secretions of a wound are drawn up into a moist dressing better than into a dry one. Virulent anthrax bacilli placed on an artificial wound in rabbits were absorbed into these dressings and infection of the animals was prevented. Both the moist and the dry proved equally effective in this respect, but the germs were drawn up into the outer layers of the moist gauze while they were found only in the layers closest to the wound in the dry dressings.

45. **Indications for Cardiolysis.**—By this term Brauer means the freeing of the heart from rigid fixation by chronic mediastino-pericarditis. As persons in this condition are unable to bear a major operation with the necessary narcosis, he recommends removal of the bony wall over the heart, which frees the heart to a great measure. He has thus operated on two patients and the working capacity has been restored in each; the cyanosis, congestion of the liver and ascites have vanished, and the myocarditis has been improved, although not cured. The symptoms of chronic mediastino-pericarditis include congestions, progressive cardiac insufficiency, diastolic heart beat, etc., and the pulse curve is also characteristic, as he explains in detail. The most important of these symptoms, the insufficiency of the heart, is relieved by removal of the rigid chest wall to which the heart becomes more or less fastened by adhesions.

Berliner Klinische Wochenschrift.

Last indexed page 887.

47 (No. 35.) *Indications for Premature Delivery in Hyperemesis and Heart Disease. O. Tuszkai.—Ueber Indikation der Einleitung der Geburt bei Hyperemese und Cardiopathie.

48 *Ueber Cytodiagnostik. B. C. Schwarz and J. Bronstein. (Concluded.)

49 (No. 36.) *Oatmeal in Severe Diabetes. C. v. Noorden (Frankfurt).—Ueber Haferkuren bei schwerem Diabetes mellitus.

50 Origin and Composition of Alexins. R. Turro (Barcelona).—Ursprung und Beschaffenheit der Alexine.

51 Disturbances of Gait in Tetany. S. Kalischer.—Ueber Gangstörungen bei Tetanie.

52 Ueber das psychische und somatische Verhalten der Pygopagen Rosa und Josefa ("der böhmischen Schwestern"). R. Henneberg and H. Stelzner (Berlin). (Concluded.)

53 (No. 37.) *Fever and Elimination of Sugar. P. F. Richter.—Fieber und Zuckerausscheidung.

54 *Zur Pathogenese der Lungen-Tuberkulose. F. Welemínsky (Prague).

55 *Zur nasalen Dysmenorrhoe. E. Opitz (Berlin).

56 Toxic Components of Diphtheria Toxin. P. Ehrlich.—Ueber die Giftkomponenten der D.-Toxin. (Commenced in No. 35.)

57 *Hot Air in Treatment of Ear and Nose Affections. Warnecke (Hanover).—Zur Warmluftbehandlung von Ohr und Nase.

58 (No. 38.) *Ueber hysterische Autosuggestion der Kinder (of children). C. A. Ewald.

59 *Sensitive Iodin Tests. E. Rogovin.—Ueber die Empfindlichkeit der Iodproben.

60 *Action of Bile on Heart and Origin of Slow Pulse in Icterus. K. Brandenburg.—Ueber die Wirkung der Galle auf das Herz und die Entstehung der Pulsverlangsamung beim Ikterus.

61 *Vegetable Foods and Beverages in Case of Gout and Nephritis. J. W. Hall (Stockholm).—Vegetabilische Nahrung und Getränke bei Gicht und Nephritis.

62 *Sanoform as Substitute for Iodoform. G. Bamberg (Berlin.)—Sanoform als Ersatzmittel des Iodoforms.

63 Importance of Hypnosis as a Therapeutic Measure. H. Delius.—Die Hypnose in ihrer Bedeutung als Heilmittel. (Concluded.)

47. **Indications for Premature Delivery in Heart Disease and Hyperemesis.**—Tuszkai points out that many cases of the latter are due to hysteria, auto-intoxication, etc., and that interruption of the pregnancy would not remove the cause. He attributes essential hyperemesis to irritation of the perimetrium, and believes in terminating the pregnancy as a last resort after failure of all other measures, including opium, and progressing inanition is becoming a serious menace. Premature delivery is seldom necessary in case of a cardiac defect. The only indications for it are the early appearance of signs of disturbance of the compensation, especially irregularities in the pulse indicating increasing dilatation of the heart. He calls special attention from this standpoint to the lack of the normal difference between the pulse of the reclining and erect subject, and the exaggeration of this difference later as the pregnancy advances. He regards this as a valuable sign of incipient failure of compensation.

48. **Cytodiagnosis.**—Schwarz and Bronstein report trials of this diagnostic measure which have failed to demonstrate that it has much, if any, utility.

49. **Importance of Oatmeal in Diabetes.**—The oatmeal course of treatment outlined by von Noorden consists in daily ingestion of 250 gm. of oatmeal or rolled oats thoroughly cooked with 300 gm. of butter and 100 gm. albumin. The

last-mentioned may be in the form of a vegetable albumin cooked with the oatmeal, or the white of an egg may be added after it is partially cooled. The porridge thus made is taken at two-hour intervals. His experience with a hundred cases shows it is possible on this diet to partially or completely banish the sugar from the urine and likewise the acetone bodies. It is contraindicated in mild cases without diaceturia, as the oatmeal is not tolerated by such subjects. No theory has yet been advanced to explain the facts observed in regard to the benefits from a change to oatmeal in severe cases except that it may possibly be due to a difference in the kind of starch. They confirm the necessity for individualizing treatment in diabetes. He has been testing this oatmeal diet for more than a year and gives in tabulated form 5 typical cases illustrating the effects as observed in various groups. He allows at the same time a little brandy or wine and a little strong black coffee. The oatmeal he uses is Knorr's *Hafermehl* or the Hohenlohe *Haferflocken*. The first case is that of a young man, 18 years old, who had presented symptoms of diabetes for six months. Notwithstanding strict adherence to the usual antidiabetic diet he averaged from 20 to 96 gm. of sugar a day, with 1.5 to 2 gm. acetone and 1.5 to 3 gm. ammonia. These proportions were progressively increasing and a change was made to the oatmeal diet. The acetone vanished by the third day and the sugar dropped from 50.9 gm. to zero in a week. Von Noorden has had 10 cases of this type. After two months of the oatmeal diet, varied occasionally with a little bacon, eggs or vegetables, he was dismissed, with orders to keep to a modified form of this diet: For breakfast, tea or coffee, with cream, and 2 eggs; for early lunch, 20 gm. of oatmeal cooked with 30 gm. butter, 50 gm. bacon and 2 yolks of eggs. For the midday meal, 120 gm. meat, abundance of green vegetables and a salad, 50 gm. potato, 25 gm. cheese and coffee with cream. For the fourth meal, tea with cream and 2 yolks, and for supper, 80 gm. meat, green vegetables in abundance with an oil salad, 50 gm. potato, 25 gm. cheese, and butter. Every day a Rademann *Luftbrod* (aërated bread made from gluten free from carbohydrates) and 100 gm. of a "desugared fruit preserve," *entzuckertes Obst*. Every fifth day a "vegetable day" is interposed. Three-fourths of a bottle of light wine is also allowed daily. On this diet the patient's urine has been completely free from sugar since last April. Case 2 was a patient with diabetes for ten years, and the oatmeal diet restored the balance of toleration which had been lost for a time, as shown by increasing weakness, etc. It reduced the sugar from 131.8 to about 30 gm. and also reduced the acetone. In three weeks the patient was restored to his regular balance of toleration and has been in comparatively good health since. In a third group, the interposition of the oatmeal diet evidently warded off impending coma. In the typical case described the sugar was completely banished after it had reached 110.7 gm. a day, and the patient gained in weight on the oatmeal. In the fourth group of cases the oatmeal aggravated the condition. In the typical case tabulated the patient was a man of 27 who had shown signs of diabetes for more than two years, the first symptoms noted after a fall on the back of the head. When he entered the clinic the sugar ranged from 75 to 123 gm. and the oatmeal diet proved less effectual in reducing the sugar than the ordinary diabetic diet, and the acetone increased. In the fifth group the typical case was that of a man of 33 with 57.7 to 98.8 gm. sugar. On a strict diabetic diet the sugar had been banished from the urine, but it returned in nearly as large proportions as at first when an oatmeal diet was instituted. The effect on the sugar in the urine is never so pronounced with Winternitz's milk and Mosse's potato diet as is obtained in appropriate cases with the oatmeal.

53. **Fever and Glycosuria.**—Richter induced glycosuria in animals with adrenalin and then raised the temperature by irritation of the corpus striatum, without modifying the glycosuria. The elimination of sugar induced by the adrenalin was not affected by the subsequent high temperature. On the other hand, there was no glycosuria when fever was induced by injection of streptococci with subsequent administration of adrenalin. He assumes that the bacteria use up the sugar in the blood. This would explain the increased tolerance to sugar in alimentary glycosuria and diabetes during febrile affections.

54. **Pathogenesis of Pulmonary Tuberculosis.**—Weleminsky infected a number of animals with tuberculosis by way of the alimentary canal. He found that a number subsequently developed pulmonary tuberculosis, showing that the infection must have reached the lungs by way of the submaxillary and bronchial glands into the blood and thence to the lungs. The germs settle in the lungs, as they meet less resistance here.

55. **Nasal Relation of Dysmenorrhea.**—Opitz accepts the possibility that the uterus may be influenced by way of the nose. This assumption is sustained by the close connection between the sense of smell in animals and the sexual activity, which in the female probably leads to contractions of the uterus from stimulation of the olfactory nerves. Something similar possibly occurs likewise in human females. As dysmenorrhea in many cases is due to abnormally vigorous or abnormally perceived contractions of the uterus, it may be considered in many cases a reflex neurosis, and as such may be amenable to treatment through the genital points in the nose. His clinical experience sustains this assumption. It certainly affords the practitioner another weapon for combating dysmenorrhea.

57. **Hot-Air Treatment of Ear and Nose Affections.**—Warnecke uses an apparatus of his own devising, which is described and illustrated in this communication. He has found the hot air extremely useful after operations, also for empyema of the antrum of Highmore and in chronic otitis media.

58. **Hysteric Autosuggestion in Children.**—Ewald describes 3 cases in boys from 7 to 9 years old in which the hysteria was not pronounced. Removal to another environment or a sham operation cured the condition. The autosuggestion involved the abdominal organs in each instance and simulated a foreign body and appendicitis. The third child vomited and regurgitated constantly.

59. **Comparative Sensitiveness of the Iodin Tests.**—Rogovin has been testing the various reactions that have been published. He found that it was possible to detect the iodin in the urine even after ingestion of as small an amount as .005 gm. of potassium iodid. The Harnack reactions proved much more sensitive than any others. The Sandland test is also reliable, but Jolles' and the others failed when the proportions were small. He gives the technic of the various tests in detail.

60. **Action of Bile on the Heart.**—Brandenburg found that even a very small amount of bile injected into the circulation of frogs and dogs had an irritating effect on the sensory innervation of the heart and induced reflex irritation of the vagus with transient enfeeblement of the contractions of the auricles and slowing of the heart beat. This occurred in the experiments on animals much sooner than in icterus in man. Reflex irritation of the vagus seems to be an important factor in the development of the disturbances in the circulation observed in icterus. Its effect is supplemented by injury of the cells of the myocardium at the mouths of the large heart veins.

61. **Vegetable Foods and Drinks in Respect to Gout and Nephritis.**—Hall calls attention to the large proportion of the purin nitrogen which is contained in oatmeal, beans, peas, asparagus and onions, also in beer and ale. These articles of diet and these beverages should, therefore, be prohibited or restricted in gout and nephritis.

62. **Sanoform as Substitute for Iodoform.**—Bamberg has used sanoform in 225 cases, mostly gynecologic, and has been much pleased with this odorless combination of iodin and salicylic acid. It does not seem to have any direct bactericidal power and its therapeutic action is due to the liberation of the iodin and salicylic acid. He is now using it exclusively in the place of iodoform.

Deutsches Archiv f. klinische Medizin, Berlin.

Last indexed page 1237.

64 (LXXVII, Nos. 3-4.) *Ueber Leukanämie. H. Luce (Hamburg).

65 *Das Westphalsche Phänomen bei kruppöser Pneumonie im Kindesalter. H. Roeder.
66 *The Muscular Disturbances in Thomsen's Disease. P. Jensen.—Zur Analyse der Muskelstörung bei der T. Krankheit.
67 Zur Klinik und Pathologie der Biermerschen progressive Anämie. E. Bloch.
68 *Antiperistalsis in Stomach. E. Rautenberg.—Ueber antiperistaltische Bewegungen. im Magen.
69 *Behavior of Eosinophiles in Various Diseases. P. Reckzeh.—Das Verhalten der weissen Blutkörperchen, besonders der eosinophilen Zellen, bei einigen Erkrankungen der Haut, des Blutes und bei Infektionskrankheiten.
70 *Blood Pressure During Exercise in Health and in Heart Disease. O. Moritz (St. Petersburg).—Der Blutdruck bei Körperarbeit gesunder und herzkranker Individuen.
71 *New Theory of Circulation and Suggestions for Treatment Based Thereon. K. Hasebroek (Hamburg).—Versuch einer Theorie der gymnastischen Therapie der Zirkulations-Störungen auf Grund einer neuen Darstellung des Kreislaufs.

64. **Leukanemia.**—Luce applies this name to the rare blood affections characterized by the combination of the blood findings of pernicious anemia with those of lymphatic leukemia. In a case recently observed a woman, 40 years old, presented an acute angina followed by the gradual development of a hemorrhagic diathesis with hemorrhages into the retina, morbid heart sounds, and enlargement of the glands in the neck, the liver and spleen, proceeding to a fatal termination in six months. He regards the case as merely one form of the morphologic manifestations with which the blood-forming apparatus responds to a series of injurious influences. It is introduced by some lymphadenoid or myeloid metaplasia of the bone marrow of unknown etiology. The pernicious anemia is, therefore, myelogenic and not hematogenic in this leukanemia.

65. **Westphal's Sign in Croupous Pneumonia in Children.**—Roeder denies that the knee-jerk has any significance for either diagnosis or prognosis in croupous pneumonia.

66. **The Muscle Troubles in Thomsen's Disease.**—Jensen states that comparison of the muscle curve obtained with the Mosso ergograph in health and in myotonia congenita shows that the primary contraction occurs much more slowly in the latter. Instead of the normal 2 seconds, 8 are required for the contraction of the myoclonic muscle. He is inclined to attribute this and the other peculiarities observed to some anomaly in the muscle itself, possibly in the terminal ramifications of the motor nerves in the muscle. It is probably some nutritional disturbance in the assimilation of the contractile muscle fibers or sarcoplasma and defective disassimilation. He found in his experience with a case of this disease carefully studied that thyroid tablets and injection of orchitic extract induced a temporary improvement. He also imagined that benefit was derived from inhalation of oxygen, which he gave on account of its efficacy in promoting metabolic processes in general. The results observed justify further trials of oxygen.

68. **Antiperistalsis in Stomach.**—In 2 cases of gastric tumors Rautenberg noticed marked antiperistaltic movements in the stomach.

69. **Eosinophiles in Various Diseases.**—Reckzeh's investigations of 70 subjects showed that in scarlet fever the eosinophiles range from 0 to 23 per cent. of the white corpuscles; in measles from 0 to 5 per cent. None were to be found in erysipelas. In diphtheria the number corresponded to the normal figure. In leukemia there was a moderate increase; in pernicious anemia they were absent. In mercurial dermatitis the eosinophilia commenced at the point of irritation, but became general later.

70. **Blood Pressure During Exercise.**—Moritz remarks that a very slight increase in blood pressure during hard exercise indicates some severe functional heart trouble. In case of slight valvular defect the blood pressure may behave normally during exercise, but with serious valvular defect it varies as in case of myodegeneration, that is, the blood pressure is increased during the exercise, but never reaches the normal height, and is liable to drop even during the muscular exertion; afterward it returns to normal much more slowly than in health. The amount of disturbance in the circulation and the condition of the heart muscle are of greater importance from this point of view than the kind of the valvular affection. In health the Riva-Rocci apparatus shows that the blood pressure does not rise during mild exercise, but during vigorous muscular exertion it rises with the exercise, remains at a regular height and subsides to normal at the close. The more will power and exertion required for the exercise and to maintain it in spite of augmenting fatigue, the higher the blood pressure. In case of heart disease the blood pressure may fall below normal after the conclusion of the exercise, showing the fatigue of the heart. These statements are the results of tests according to Dehio's method on 6 healthy subjects, and on 23 with heart disease.

71. **Treatment on New Basis of Circulatory Disturbances.**—The favorable action observed under certain circumstances from therapeutic gymnastics in cardiac and valvular affections, is explained by Hasebroek on the basis of a new theory which he tentatively proclaims. The theory of the circulation as the result of the difference of pressure between the arteries and veins induced by the constantly recurring action of the heart, does not explain all the phenomena observed. He thinks that we can assume a further propulsive energy at the periphery independent of that in the heart. The periphery represents another, second, independent pumping apparatus, coupled with that of the heart. The periphery has not only its elastic contraction and expansion, but also its active diastole and systole in the arteries. This diastolic-systolic activity is manifested in the capillaries as a sucking in, an inspiration, while in the arteries it is more of a propulsive energy. Both these forces combine to compel an independent and vigorous flowing through of the blood stream into the veins. The latter are passive, serving as a passive reservoir for the blood stream, and thus the venous system is able to adapt itself at all times to the varying activity of the organs at either end. This peripheral diastolic-systolic, independent, propulsive apparatus may become impaired and entail various disturbances in the circulation. The heart by redoubling its efforts may compensate for a time the lessened activity of the peripheral apparatus, or the latter may compensate for deficient heart action. The beneficial effects of therapeutic gymnastics are restricted to those cases of circulatory disturbances in which the heart is still sound and the trouble is due only to some disorder in the peripheral pumping apparatus. If the heart muscle is already affected, benefit can be attained only when it is possible to stimulate the vitality of the peripheral tissue and by functional exercise of its vessels to exert a favorable influence on this independent peripheral circulation. When both heart and periphery are affected, no benefit can be derived from such exercises. The assumption that exercise strengthens the heart muscle is a mistaken one. The vitality of the heart is increased by sparing it unnecessary exertion, and by inducing compensation on the part of the independent propulsive force at the periphery. Therapeutic exercises are an important prophylactic measure in the early stages of chronic disturbances in the circulation and in well-compensated valvular defects. They prevent or retard the progress or inception of the vicious circle in the circulation, that is, the chain of sluggish current, increased resistance and diminished volume of blood sent forth at each beat, entailing a still more sluggish current, etc.

Deutsche Med. Wochenschrift, Berlin and Leipsic.

72 (XXIX, No. 44.) *Fatty Degeneration. H. Ribbert (Göttingen).—Zur Morphologie und Chemie der fettigen Degeneration.
73 Ueber Herz-Bigeminie und Hemisystolie. F. Riegel (Giessen).
74 *Fragmentation of Feces. P. Grützner (Tübingen).—Ueber die Zerkleinerung menschlicher Fäces.
75 *Ueber die Excochleatio Prostatæ. Riedel (Jena).
76 Idiopathischer Priapismus, 9 Tage peristirend. Mainzer.
77 *Rapid Hardening and Embedding. A. Stein (Heidelberg).—Ueber Schnellhärtung und Schnelleinbettung.
78 By-effects of Mesotan. B. Aronsohn.—Unangenehme Nebenwirkungen des Mesotan.
79 *Zur Behandlung der Obstipation im Säuglingsalter (in infants). Clamann.
80 The Defects in the Darwinian Theory. A. Fleischmann (Erlangen).—Die Fehler der Darwin'schen Theorie.
81 Life Insurance Formulas. O. Schellong (Königsberg).—Die Formuläre der Lebensversicherungsgesellschaften.

72. **Fatty Degeneration.**—Ribbert argues to prove that fatty degeneration is essentially in all cases an infiltration of fat into previously injured cells. Fat enters into normal cells

and accumulates as deposits of fat, forming the adipose tissue. When it enters into pathologic cells we have fatty degeneration. The two processes may thus be regarded as a physiologic and a pathologic fatty infiltration.

74. **Fragmentation of Feces.**—Grützner has found that feces may be readily broken up if alcohol is poured over them. He uses an ordinary egg beater, the kind made with the wire wound in a spiral cone, the handle fastened to the tip of the cone.

75. **Intracapsular Resection of the Prostate.**—Riedel relates the details of 5 cases treated by excochleatio prostatæ. One patient had been using the catheter for two years. He was able to urinate spontaneously the evening after the intervention. As his bladder was sound and the urine had not putrefied, the benefit derived has been permanent. In another case the prostate was located at an unusual height and the bladder presented a diverticulum so large that it might be considered a supernumerary bladder. This anomaly was not discovered at the first operation, when the prostate was shelled out, and the patient did not survive the second operation, the obliteration of the diverticulum. He was a man of 61, a consumptive with contracted kidney, and his urinary disturbances were of three years' standing. The removal of the prostate restored spontaneous urination for several months, until the bladder became insufficient. The 2 other cases were successful, although the urethra was injured in each. Riedel's experience demonstrates that the operation should be undertaken while the bladder is still sound. When it is insufficient, the residual urine will collect and putrefy, and the patient's condition be actually aggravated, as before the intervention the residual urine had been evacuated with the catheter, which after the operation is discarded. He would be inclined to recommend the operation to younger men, even if he found it necessary to repeat it later on account of renewed growth of the prostate. He works through an incision curving from one tuber ischii to the other, a short distance in front of the anus, with a longitudinal incision to the scrotum.

77. **Rapid Hardening and Embedding.**—In brief, the modification of the Lubarsch method described consists in 5 minutes in 10 per cent. formalin; 5 minutes in 95 per cent. alcohol; 10 minutes in absolute alcohol changed once; 15 to 20 minutes in anilin oil until entirely transparent. During these maneuvers the specimen is kept in the incubator at 50 to 52 C. The temperature of the incubator is then increased to 58 or 60 C., and the specimen is placed in xylol for about 15 minutes, changing the fluid two or three times, and lastly in paraffin for 10 to 30 minutes. The entire procedure is complete in 75 to 90 minutes. It is applicable only to sections not more than 3 mm. thick. Specimens thus prepared eighteen months ago are still in perfect preservation. Gutmann and Stein both commend this method as preferable to all others for rapid, exact diagnosis from curettings, etc.

79. **Mechanical Treatment of Infants' Obstipation.**—Clamann introduces an oiled, medium-sized, Nélaton catheter into the rectum as the infant lies on his back. He works it in for 15 cm. or more and twists it gently to induce reflex expulsive action on the part of the intestines. This "oil catheter" has never failed him in several years' experience with it.

Münchener Med. Wochenschrift, Munich.

82 (L, No. 43.) Granular Synthesis of Fat in Migrating and Pus Cells. J. Arnold (Heidelberg).—Ueber granuläre Fettsynthese in Wanderzellen und Eiterzellen.

83 *Hitherto Unknown Effect of Roentgen Rays on the Animal Organism. Albers-Schönberg.—Ueber eine bisher unbekannte Wirkung der Röntgenstrahlen auf den Organismus der Tiere.

84 Essence and Etiology of Contracted Kidney and Successful Treatment. P. Edel (v. Leube's clinic, Würzburg).—Ueber Wesen und Aetiologie der Schrumpfniere und ihre erfolgsprechende Behandlung.

85 *First Case of Successful Ligation of Hepatic Artery on Account of Aneurism. H. Kehr (Halberstadt).—Der erste Fall von erfolgreicher Unterbindung der Art. hepatica propria wegen Aneurysma.

86 *Tuberculin in Diagnosis. T. Grünenwald (Tübingen).—Ueber die Anwendung des alten Koch'schen Tuberkulins zur Erkennung der Lungentuberkulose.

87 Value of Tuberculin Diagnostics for Sanatoria. M. Pickert (Beelitz).—Ueber den Wert der Tub.-Diagnostik für die Lungenheilstätten.

88 Ueber Tuberkulin- und Heilstätten-Behandlung Lungenkranker. W. Freymuth (Breslau).

89 *Die Streptokokken-Serum-Behandlung der Tuberkulose-Misch-Infektion. Menzer (Senator's clinic, Berlin).

90 Ship Sanatoria. G. Baer.—Beitrag zur Heilstättenfrage. Ueber "Schiffsanatorien."

91 Ueber Coitus-Verletzungen. T. Wertheimber (Nuremberg).

92 Zur Behandlung des Abortus. O. Kneise (Halle).

83. **Sterility and X-Rays.**—Albers-Schönberg reports experiments on animals showing that *x*-raying produces in them a marked inability to reproduce, whether transient or permanent is yet to be determined, and this without any decided interference with the general state of health. The consequences of the rays, sterility, is by the killing of the spermatozoa, which soon reaches the point of complete azoöspermia. He experimented effectually on 5 rabbits and 6 guinea-pigs with from 377 to 518 minutes of *x*-ray application in different cases. Exposure of 195 minutes did not produce a complete effect.

85. **Aneurism of the Hepatic Artery.**—In the case reported by Kehr there was an aneurism of the right branch of the hepatic artery which necrosed and connected with the cystic duct. The artery was tied with double ligatures and severed between them immediately below the bifurcation, and the aneurism, the size of a goose egg, was exposed and cleared out. Tamponade was applied without drainage. The stomach was found to be sound and no other lesions were discovered. The patient made a good recovery. A careful watch was kept during the first forty-eight hours for signs of liver necrosis but it did not appear. He remarks in regard to such cases that symptoms of gastric or intestinal bleeding with colic and icterus together, should lead to a suspicion of the possibility of aneurism of the hepatic artery.

86. **Tuberculin Diagnosis.**—Grünenwald believes that the diagnostic use of tuberculin is without danger, and gives the results of his own experiments. He used the old tuberculin of Koch, and employed about 1 mg. in the beginning, later increasing to larger doses in some cases where reaction was not prompt. The injections were made between the shoulder blades. In the 117 cases, 89, that is, 76 per cent. gave a positive reaction; 28, or 23.9 per cent., a dubious or negative reaction. In 103 cases presenting pronounced or suspicious symptoms of pulmonary tuberculosis, 88, that is, 85.4 per cent., gave a positive reaction; 7, or 6.8 per cent. dubious, and 8, or 7.8 per cent. negative. Out of 8 patients with bronchitis associated with chronic pneumonia and bronchiectasis, 2 reacted positively and 6 negatively. In 6 pleuritic cases, 2 gave a positive reaction and 4 a negative. The occurrence of these negative reactions in patients who exhibit decidedly marked symptoms of tuberculosis is remarked on, and it is admitted that there is much yet to be studied in regard to the working of tuberculin in this regard, though its value is not questioned.

89. **Streptococcus Serum Treatment of Mixed Tuberculosis Infection.**—Menzer has used antistreptococcus serum in 11 cases of Turban's first stage of tuberculosis. Of these, 8 recovered with an average increase of weight of 12 pounds in 3.2 months; 3 were perceptibly improved with an average increase in weight of 5 pounds in 1.4 months. In 3 cases in the second stage, 1 recovered with 10 pounds increase of weight in 3 months. One was perceptibly improved in the same time with a still greater increase of weight and one also improved in less than 2 months with a slight increase. Five cases in the third stage were perceptibly improved, and 3 were not. Recovery, as here understood, is a disappearance of all catarrhal phenomena, with still slight apical dullness and alteration of the respiratory sounds. The maximum of serum injected was about 5 c.c. in the first stage; the injections were made ordinarily in the upper thigh. He began with .5 c.c. and gradually increased the dose up to the above limit.

Therapeutische Monatshefte, Berlin.

Last indexed page 1308.

93 (XVI, No. 8.) *Choice of Method for Treating Retroflexion with Special Regard to the Subjective Disturbances. Winternitz.—Die Wahl der Behandlungsmethoden bei Retroflexio uteri unter bes. Berücksichtigung der subjektiven Beschwerden.

94 *Albumin Diet. P. Bermbach.—Natürliches Eiweiss und Eiweiss-präparate in der Krankenernährung; Eiweissdiät.
95 *Treatment of Fatigue Insufficiency of the Brain. L. Fürst. —Ueber Ernährungs- und Funktionsinsuffizienz des Gehirns.
96 Fall von hysterischer Blindheit durch hypnotische Suggestion dauernd geheilt. A. Czellitzer.
97 Saline Baths at Inowrazlaw. Bergel.—Das Solbad I.
98 Zur therapeutischen Wirkung der Bier-Hefe (yeast). Gollner.

93. **Treatment of Retroflexion.**—Winternitz thinks that movable retroflexion without complications in nulliparæ does not cause any special nervous disturbances, and consequently does not call for treatment. If nervous disturbances are noted in child-bearing women, such as are especially liable after forceps deliveries, and also in case of complicating displacements of the vagina, a round ring pessary remedies the conditions better than any other. The symptoms will be improved to such an extent as to demonstrate in the latter case that the trouble was due to the sliding down of the vaginal walls rather than to the retroflexion.

94. **Albumin Diet.**—Bermbach is an earnest advocate of an abundant supply of albumin in all cases of myodegeneration of the heart, severe anemia, hysteria and stomach affections. He discusses various modes of providing the albumin, and expresses his preference for tropon or eucasin, two tablespoonfuls a day.

95. **Lecithin in Brain Fag.**—Fürst has witnessed most remarkable success from the administration of two lecithin pills three times a day in cases in which the brain was fatigued or exhausted from any cause. He thinks that we have in lecithin a most valuable agent for toning up the brain when suffering from overuse. It supplies the phosphorus in an active, organic form, and the entire metabolism soon shows the benefit derived. In six to eight weeks the brain becomes much clearer and more active. The favorable results of ingestion of eggs, milk, brain substance, spermin and cerebrin, are undoubtedly due to the large proportion of lecithin they contain.

Zeitschrift f. Geb. und Gynäkologie, Stuttgart.

Last indexed XL, page 478.

99 (XLVIII, No. 2.) *Structure and Histogenesis of Placenta Tumors. A. Dienst (Breslau).—Ueber den Bau und Histogenese der Plazentargeschwülste.
100 *Inoculation Metastases and Tardy Recurrence After Carcinoma Operations. R. Olshausen (Berlin.)—Ueber Impfmetastasen und Spätrezidive nach Karzinomoperationen.
101 *Study of Glands in 7 Cases of Uterine Carcinoma. F. Oehlecker (Berlin).—Drüsenuntersuchungen, etc.
102 Justification of Perforation of Living Child. M. Hofmeier (Würzburg).—Ueber die Berechtigung der Perforation des lebenden Kindes.
103 *Opposition to Drainage. R. Olshausen.—Wider die Drainage.
104 Spontaneous Vesico-Vaginal Fistula. G. Schmauch (Chicago). —Spontane Blasenscheidenfistel nach Total-Exstirpation des Uterus wegen Carcinom. Blasenblutungen und das Ulcus simplex vesicæ perforans.
105 Study of Mechanism of Birth. M. Henkel (Berlin).—Beitrag zur Lehre vom Geburtsmechanismus.
106 (No. 3.) Ueber Tumoren des Ligamentum rotundum uteri. R. Emanuel.
107 True and Simulated Tubal Pregnancy. C. Schambacher.—Ueber wahre und vorgetäuschte Tubarschwangerschaft.
108 Plastic Closure of Vesico-vaginal Fistula. O. Küstner.—Die plastische Verwendung der Portio supravaginalis zum Verschluss von Blasenscheidenfisteln.
109 *Zur klinischen Behandlung der entzündlichen Adnexerkrankungen (adnexitis). O. Nebesky.
110 Zur histologischen Diagnose des Abortes. E. Opitz.

99. **Tumors of Placenta.**—Dienst does not consider 3 of the 46 cases of tumors of the placenta on record as quite above criticism. He describes 2 personally observed, which brings the number of reliable cases to 45. All on record to date may be called choriomata, but there is both an angiomatous and fibrous variety. He attributes the origin to some congestion in the maternal organism.

100. **Inoculation Metastases.**—Olshausen has encountered 6 cases of metastases in the abdominal wall consecutive to ablation of a malignant tumor. They are always located on one side of the cicatrix. One proved to be an inoperable carcinoma, occurring two years after removal of a carcinomatout ovarian tumor; another developed likewise two years after bilateral ovariotomy, and another five years, and a fourth seven and one-half years afterward. In the other cases the carcinoma in the abdominal wall developed seventeen and twenty-one years after ovariotomy or extirpation of an ovarian tumor. He further reports 3 cases of tardy recurrence. In one a sarcoma recurred in the ovary four and a half years after ovariotomy. In another a carcinoma developed in the other ovary and uterus seven years after ovariotomy, and in the third, there was metastasis of a carcinoma twelve years after ablation of the primary growth. All these tumors developed in the vicinity of the cicatrix, and hence are undoubtedly due to inoculation during the operation, although the long latency of the particles of the carcinoma is very remarkable.

101. **Study of Glands in Case of Uterine Carcinoma.**—Oehlecker found microscopic metastases in some of the pelvic, lumbar or retroperitoneal glands in 2 out of 7 cases thus examined. No macroscopic evidences of cancerous degeneration were perceptible. He advocates removal of all the regional glands, irrespective of their size or consistency.

103. **Opposition to Drainage.**—Olshausen does not believe in drainage after gynecologic operations except those for paratyphlitic abscesses or suppuration in the broad ligaments or on the floor of the cul-de-sac. He drained in only 9 of his last 1,555 laparotomies. This series includes 113 cases of very extensive interventions in which subsequent sepsis would have been of the most serious import, and yet all progressed favorably without drainage. He regards it as more of a danger than a benefit, except for the conditions enumerated above.

109. **Clinical Treatment of Adnexitis.**—Amann is restricting more and more operative treatment of inflammatory processes in the adnexa in favor of expectant, conservative measures. He finds that persevering conservative treatment will in time restore the working capacity in nearly every case, mild or severe. The objective findings and complications are very rarely indications for operative treatment, but subjective troubles occasionally justify it after the failure of months of conservative treatment. Nebesky reviews 360 cases. The principles of conservative treatment are repose, good food and avoidance of possible sources of injury, supplemented by hydrotherapy and balneotherapy. Three to six months are generally necessary for a complete cure. A suspicion of the tuberculous nature of the process, however, always imposes speedy operation.

Riforma Medica, Palermo.

111 (XIX, No. 41.) La paraganglina Vassale nelle atonie gastro-enteriche. G. Manicardi (Modena).
112 Caso di carcinoma primario del pancreas con riproduzioni multiple ed embolismo cerebrale, seguito da necroscopia. G. Radice.
113 *Cura della rottura dell' uretra. F. Sorrentino.
114 (No. 42.) Behavior of Yellow Fever Bacillus in Peritoneum in Experimental Infection. G. Q. Ruata (Sanarelli's service, Bologna).—Il bacillo della febbre gialla nel peritoneo durante l'infezione sperimentale.
115 *Treatment of Varices by Circular Incision of Leg. U. Dall' Acqua.—Sulla cura delle varici e delle ulceri da varici mediante incisioni circulari della gamba.
116 *Sull ' infezione mista : tifosa e diplococcica. C. Quadrone and E. Cler (Turin). (Commenced in No. 41.)

113. **Rupture of Urethra.**—In the 2 cases described, Sorrentino incised the perineum and inserted an elastic catheter backward into the bladder, then bending it he was able to introduce the other end of the catheter into the peripheral stump of the ruptured urethra, the tip emerging from the external meatus. He then sutured the urethra and the wound in tiers, using catgut. The wounds healed by primary intention, and there has been no trace of disturbance since. He was careful not to include the mucosa of the urethra in the suture, and drained with a narrow strip of gauze for forty-eight hours, leaving the elastic catheter in the urethra for eight to ten days, changing it only once during this time.

115. **Circular Incision of Leg for Varicose Ulcers.**—Dall' Acqua aims to show by clinical experience, experimental research and theoretical reasoning that the results of this method of treating varices are far from good. The only benefits he derived were the temporary cessation of the pain and the rapid healing of the wound. The advantages claimed for it by its author, Moreschi, are not realized in practice, and recurrence is frequent afterward.

116. **Mixed Typhoid and Diplococcus Infection.**—In the 2 cases reported the Widal test was extremely marked.